



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2020–0011; FF09E21000 FXES11110900000 212]

RIN 1018–BD96

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Northern Mexican Gartersnake

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the northern Mexican gartersnake (*Thamnophis eques megalops*) under the Endangered Species Act of 1973 (Act), as amended. In total, approximately 20,326 acres (8,226 hectares) in La Paz, Mohave, Yavapai, Gila, Cochise, Santa Cruz, and Pima Counties, Arizona, and Grant County, New Mexico, fall within the boundaries of the critical habitat designation for the northern Mexican gartersnake. This rule extends the Act's protections to the northern Mexican gartersnake's designated critical habitat.

DATES: This rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: This final rule is available on the Internet at <http://www.regulations.gov>. Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at <http://www.regulations.gov> at Docket No. FWS–R2–ES–2020–0011.

The coordinates or plot points or both from which the maps are generated are included in the administrative record for this critical habitat designation and are available at <http://www.regulations.gov> at Docket No. FWS–R2–ES–2020–0011 and on the

Service's website at <https://www.fws.gov/southwest/es/arizona/>. Any additional tools or supporting information that we developed for this critical habitat designation will also be available on the Service's website and may also be included in the preamble and at <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Jeff Humphrey, Field Supervisor, U.S. Fish and Wildlife Service, Arizona Ecological Services Field Office, 9828 North 31st Ave #C3, Phoenix, AZ 85051-2517; telephone 602-242-0210. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, if we determine that a species is an endangered or threatened species, we must designate critical habitat to the maximum extent prudent and determinable. On July 8, 2014, we published a final rule to list the northern Mexican gartersnake as a threatened species (79 FR 38678). Designations of critical habitat can be completed only by issuing a rule.

What this document does. This rule designates critical habitat for the northern Mexican gartersnake of approximately 20,326 acres (ac) (8,226 hectares (ha)) in La Paz, Mohave, Yavapai, Gila, Cochise, Santa Cruz, and Pima Counties, Arizona, and Grant County, New Mexico.

The basis for our action. Under section 4(a)(3) of the Act, if we determine that any species is an endangered or threatened species we must, to the maximum extent prudent and determinable, designate critical habitat. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special

management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Under Section 4(b)(2) of the Act, the Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such areas as part of critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

The critical habitat we are designating in this rule, consisting of eight units comprising approximately 217 stream miles (mi) (349 kilometers (km)) in an area of 20,326 ac (8,226 ha) for the northern Mexican gartersnake, constitutes our current best assessment of the areas that meet the definition of critical habitat for the species.

Peer review and public comment. During the proposed rule stage, we sought the expert opinions of eight appropriate specialists. We received responses from three specialists, which informed our determination. Information we received from peer review is incorporated into this final rule. We also considered all comments and information we received from the public during the comment period.

Previous Federal Actions

Please refer to the final listing rule (79 FR 38678; July 8, 2014), the original proposed critical habitat rule (78 FR 41550; July 10, 2013), and the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) for the northern Mexican gartersnake for a detailed description of previous Federal actions concerning this species. Those rules included the narrow-headed gartersnake (*Thamnophis rufipunctatus*), but this rule

designates critical habitat only for the northern Mexican gartersnake; we will address critical habitat for the narrow-headed gartersnake in future *Federal Register* publications.

Supporting Documents

In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we stated that a draft analysis document under the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) for the designation of critical habitat would be completed. We have now finalized an environmental assessment with a finding of no significant impact under NEPA. The document and finding of no significant impact is available at <http://www.regulations.gov> under Docket No. FWS–R2–ES–2020–0011 and from the Arizona Ecological Services Field Office at <https://www.fws.gov/southwest/es/arizona/>. See **Required Determinations**, below, for a discussion of our NEPA obligations for this designation.

No changes were made to our economic analysis after considering public comments on the draft document. The final economic analysis document (IEc 2019, entire) is available at <http://www.regulations.gov> under Docket No. FWS–R2–ES–2020–0011.

Summary of Changes from the Proposed Rule

We reviewed the comments related to critical habitat for the northern Mexican gartersnake (see **Summary of Comments and Recommendations**), completed our analysis of areas considered for exclusion under section 4(b)(2) of the Act, reviewed our analysis of the physical or biological features (PBFs) essential to the long-term conservation of the northern Mexican gartersnake, and finalized the economic analysis of the designation. This final rule incorporates changes from our revised proposed critical habitat rule (85 FR 23608; April 28, 2020) based on the comments that we received, and have responded to in this document, and considers efforts to conserve the northern

Mexican gartersnake.

As a result, our final designation of critical habitat reflects the following changes from the April 28, 2020, revised proposed rule (85 FR 23608):

(1) We revised unit areas for Tonto Creek Unit, Verde River Subunit (in the Verde River Subbasin Unit), and Cienega Creek Subunit (in the Cienega Creek Subbasin Unit) based on comments we received regarding areas that did or did not contain the PBFs essential to the conservation of the species. These changes resulted in a net reduction of 687 acres (278 ha) of critical habitat.

(2) We modified PBFs 1(D), 3, 6, and 6(C), as identified under Physical or Biological Features Essential to the Conservation of the Species, below.

(3) We excluded approximately 6,769 ac (2,739 ha) from entire or portions of units, as identified in **Table 2, Areas excluded from critical habitat designation by critical habitat unit for the northern Mexican gartersnake.**

(4) We corrected several errors in unit descriptions.

Summary of Comments and Recommendations

We requested written comments from the public on the original proposed critical habitat rule (78 FR 41550; July 10, 2013) and on the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) for the northern Mexican gartersnake. The comment period for the original proposed critical habitat rule opened on July 10, 2013, and closed on September 9, 2013; the comment period for the revised proposed critical habitat rule opened on April 28, 2020, and closed on June 29, 2020.

For the original proposed critical habitat rule (78 FR 41550; July 10, 2013), we contacted appropriate Federal, State, Tribal governments, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed critical habitat designation. For the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we again contacted all interested parties, including appropriate Federal

and State agencies, Tribal governments, scientific experts and organizations, and other interested parties, and invited them to submit written comments on the revised proposal. In the April 28, 2020, revised proposed rule, we stated that any comments we received in response to the July 10, 2013, proposed rule need not be resubmitted as they would be fully considered in this final rule. Newspaper notices inviting general public comments were published throughout the range of the proposed critical habitat designation for both the original and revised proposed rules.

During the comment period on the original proposed critical habitat rule (78 FR 41550; July 10, 2013), we received approximately 30 written comment letters on the proposed critical habitat designation. During the comment period on the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we received an additional 40 comment letters on the revised proposed critical habitat designation or the draft economic analysis (IEc 2019, entire). We also received from several parties requests for exclusion of areas that were not identified in the revised proposed rule. We reviewed each exclusion request and whether the requester provided information or a reasoned rationale to initiate an analysis of exclusion or support an exclusion (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016)). All substantive information provided during both comment periods has either been incorporated directly into this final determination or is addressed in our responses below.

We also note that we no longer use primary constituent elements (PCEs) to identify areas as critical habitat. We eliminated PCEs due to redundancy with the physical or biological features (PBFs). This change in terminology is in accordance with a February 11, 2016 (81 FR 7414), rule to implement changes to the regulations for designating critical habitat. In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we used the comments and additional information to revise: (1) The

PBFs that are essential to the conservation of the species and which may require special management considerations or protection under the Act; (2) the criteria used to define the areas occupied at the time of listing for the species; and (3) the criteria used to identify critical habitat boundaries. We then applied the revised PBFs and identification criteria for the species, along with additional information we received regarding where these PBFs exist on the landscape to determine the geographic extent of each critical habitat unit. We received comments on the original proposed critical habitat rule (78 FR 41550; July 10, 2013) that referred to PCEs, and our responses to those comments below correlate with the respective PBFs from the revised proposed critical habitat rule (85 FR 23608; April 28, 2020).

Peer Review

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review actions under the Act, we solicited expert opinion on the original proposed critical habitat rule (78 FR 41550; July 10, 2013) from eight knowledgeable individuals with scientific expertise that includes familiarity with the northern Mexican gartersnake and the narrow-headed gartersnake and their habitats, biological needs, and threats. We received responses from three of the peer reviewers. In 2020, during the public comment period for the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we received comments from one of the peer reviewers regarding our revised proposed rule. We address these peer reviewer comments in this final rule as appropriate.

This rule designates critical habitat only for the northern Mexican gartersnake; therefore, in this rule, we limit our discussion of the peer reviewer and public comments we received to those concerning the northern Mexican gartersnake. We will respond to public comments on the narrow-headed gartersnake critical habitat designation when we finalize that rule. We reviewed all the comments we received from the peer reviewers for

substantive issues and new information regarding the northern Mexican gartersnake and its habitat use and needs. The peer reviewers provided additional information, clarifications, and suggestions to improve the designation. Our revised proposed critical habitat rule (85 FR 23608; April 28, 2020) was developed in part to address some of the concerns and information raised by the peer reviewers in 2013. The additional details and information received or raised by the peer reviewers have been incorporated into this final rule, as appropriate. Substantive comments we received from peer reviewers as well as Federal, State, Tribal, and local governments, nongovernmental organizations, and the public are summarized below.

Comment 1: One peer reviewer commented that nonnative fishes of the Centrarchidae and Ictaluridae families characterized by the term “spiny-rayed fishes” are not the only nonnative fishes that are detrimental to native fishes that are the prey for the gartersnake. They stated that the red shiner in the Cyprinidae family, nonnative mosquitofish in the Poeciliidae family, and nonnative trouts in the Salmonidae family all negatively impact native fishes as well. A second peer reviewer also commented that brown trout are a harmful nonnative and would impact the physical or biological features related to lack of nonnative species in several subunits.

Our Response: In determining the PBFs for the gartersnake, we intended to identify those species of nonnative fish that were both considered highly predatory on gartersnakes and also highly competitive with gartersnakes in terms of common prey resources. The nonnative fish species we view as most harmful to gartersnake populations include bass (*Micropterus* sp.), flathead catfish (*Pylodictis* sp.), channel catfish (*Ictalurus* sp.), sunfish (Centrarchidae), bullheads (*Ameiurus* sp.), bluegill (*Lepomis* sp.), crappie (*Pomoxis* sp.), and brown trout. While other species may negatively impact native fishes, we highlighted the nonnative fish species that pose the greatest threat to northern Mexican gartersnakes.

Comment 2: One peer reviewer stated that our application of the “adverse modification” standard to fish renovation efforts is flawed because we can salvage gartersnakes prior to stream renovations and release them after a native fish prey base has been reestablished.

Our Response: For the public and section 7 practitioners to understand the types of actions considered to have potential effects to designated critical habitat, we generally identify those types of actions that could potentially result in adverse modification of designated critical habitat. The actual effects of a proposed action on designated critical habitat are dependent on many factors related to both the action being proposed and the project area. Conservation measures can be evaluated against specific attributes of the proposed action at the time of consultation for their suitability and potential implementation. We agree that salvaging gartersnakes prior to stream renovations and then releasing them after a native fish prey base has been reestablished could be a conservation recommendation identified during section 7 consultation to address effects of such a proposed action that includes fish renovation efforts.

Comment 3: One peer reviewer stated that no areas should be excluded from the critical habitat designation based on existing habitat conservation plans because we cannot enforce implementation of conservation plans.

Our Response: Section 4(b)(2) of the Act (16 U.S.C. 1531 et seq.) states that we shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Act provides that we may exclude an area from critical habitat if we determine that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless we determine, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

Under our Policy Regarding Implementation of Section 4(b)(2) of the Act, (81 FR 7226; February 11, 2016), when conducting this analysis we consider a number of factors including whether there are permitted conservation plans covering the species in the area such as habitat conservation plans, safe harbor agreements, or candidate conservation agreements with assurances, or whether there are non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat. Under the policy, we analyze habitat conservation plans when weighing whether the benefits of exclusion outweigh the benefits of including these areas in the critical habitat designation and provides guidance on the analysis, including looking at whether the permittee is properly implementing the plan and is expected to continue doing so. We have conducted a weighing analysis to determine if the benefits of exclusion outweigh the benefits of including these areas and have used our discretion to determine if the existing habitat conservation plans are sufficient to conserve the species (see **Exclusions**, below).

Comment 4: One peer reviewer commented that it would be helpful to have a rating system for the PBFs about prey bases consisting of native fishes and an absence of nonnative fishes, to show a gradient among sites.

Our Response: For recovery implementation purposes, we see value in understanding and tracking the status of the PBFs related to prey base and absence of nonnative aquatic predators, such as nonnative fishes. However, in terms of species composition or relative abundance, we do not currently have information on what the threshold of each nonnative aquatic predator or combination thereof is to be considered detrimental to the northern Mexican gartersnake. These thresholds would also vary depending on the condition of other PBFs, including organic and inorganic structural features in a stream or lentic water body.

Federal Agency Comments

Comment 5: The U.S. Forest Service (USFS) commented that the term “spatially intermittent flow” used in PCE 1 of the original proposed critical habitat rule (78 FR 41550; July 10, 2013) is ambiguous because spacing between sections of flowing water can vary greatly and may not meet the biological needs of the gartersnake or its prey base. Also in response to that 2013 proposed critical habitat rule, another agency requested we justify inclusion of long ephemeral reaches of otherwise perennial streams (i.e., San Pedro River) in critical habitat for the northern Mexican gartersnake.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) and this rule, we define perennial, intermittent, and ephemeral as related to stream flow included in PBF 1 for the northern Mexican gartersnake and clarify the spectrum of stream flow regimes that provide stream habitat for the species based on scientifically accepted stream flow definitions (Levick *et al.* 2008, p. 6; Stromberg *et al.* 2009, p. 330) (see “Stream Flow” in 85 FR 23608, April 28, 2020, p. 23613; and **Physical or Biological Features Essential to the Conservation of the Species**, below).

Comment 6: USFS requested clarification of what level of water pollutants are “low enough not to affect recruitment” for PBFs 1(D) and 6(C) for the northern Mexican gartersnake in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020).

Our Response: We do not have specific data related to water pollutants that are “low enough to affect recruitment” for the northern Mexican gartersnake. Therefore, in this rule, we have amended these PBFs to read as follows: “Water quality that meets or exceeds applicable State surface water quality standards” (see **Physical or Biological Features Essential to the Conservation of the Species**, below). Although water quality is not identified as a threat to the northern Mexican gartersnake, it is a threat to its prey base. Water quality that is absent of pollutants or has low levels of pollutants is needed to support the aquatic prey base for the northern Mexican gartersnake. State water quality standards identify levels of pollutants required to maintain communities of organisms that

have a taxa richness, species composition, and functional organization that includes the aquatic prey base of the northern Mexican gartersnake.

Comment 7: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), USFS commented that including stock tanks as critical habitat for the northern Mexican gartersnake may be problematic. USFS stated that maintaining stock tanks for recovery of the species may divert surface water that might otherwise contribute to better habitat, they may contribute to groundwater pumping, and they provide refuge and dispersal for American bullfrogs (*Rana catesbeiana*).

Our Response: Six constructed ponds (small earthen empoundments) are included in this final designation of critical habitat for the northern Mexican gartersnake. Four of these constructed ponds were originally created for livestock and considered stock tanks. Three of these stock tanks are in the Cienega Creek Subbasin Unit, and one is in the Upper Santa Cruz River Subbasin Unit. Two additional constructed ponds are in the Upper San Pedro River Subbasin Unit. Similar to most constructed ponds in arid zones that collect surface water, each of the six constructed ponds included in the critical habitat designation collect surface water from a stream that would not otherwise be perennial or even intermittent, and therefore would not contribute to better habitat for the northern Mexican gartersnake. In addition to catching surface water run-off, the three stock tanks on Las Cienegas National Conservation Area (NCA) in the Cienega Creek Subbasin Unit are also supplied by groundwater supplied by adjacent wells. The amount of water that may be pumped for these three stock tanks is small and not likely to meaningfully contribute to declining groundwater levels in the Cienega Creek watershed.

While we understand that all ponds can facilitate the invasion of bullfrogs; bullfrog control efforts are ongoing in southeastern Arizona where these six constructed ponds occur. Bullfrogs have been eradicated from the three ponds on Las Cienegas NCA since 2013, and although the constructed pond that serves as a stock tank on USFS lands

is currently infested with bullfrogs, there are plans to eradicate bullfrogs in this area once funding is obtained. The fifth constructed pond is on the Appleton-Whittell Research Ranch and has been regularly monitored for bullfrogs for at least five years. If a bullfrog is found, it is immediately removed. The sixth constructed pond is on USFS lands, has never been infested with bullfrogs, and is not within dispersal distance of currently known bullfrog sites.

All three constructed ponds on Las Cienegas NCA and one on USFS lands included in the final designation were recently renovated by the land manager to provide habitat for native aquatic species including the northern Mexican gartersnake, and we conclude that they contribute to the conservation of the species. All other constructed ponds that may also serve as stock tanks on the Las Cienegas NCA and USFS lands are no longer included in critical habitat because they are not considered occupied by the northern Mexican gartersnake (see **Criteria Used to Identify Critical Habitat**, below).

Comment 8: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), a Federal agency stated that we should make it clear that when the 600-foot (ft) width of critical habitat falls outside the stream channel, such as when channels are constricted by narrow canyon walls, critical habitat does not include upland areas that would not be used by the northern Mexican gartersnake.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) and in this rule, for the northern Mexican gartersnake, we define the lateral extent of critical habitat to include the wetland or riparian zone adjacent to a stream or lentic water body, whichever is greater. We delineate based on riparian zone rather than delineating a set distance, as this approach more accurately captures areas used by the northern Mexican gartersnake for thermoregulation, shelter, foraging opportunities, brumation, and protection from predators. Thus, we conclude that the changes that we made address this comment.

Comment 9: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), USFS stated that bankfull stage cannot be defined for reservoirs within the proposed critical habitat and we should consider defining critical habitat for reservoirs or lakes from the maximum capacity of the water body.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) and this rule, we define the extent of critical habitat around lentic water bodies as the riparian habitat adjacent to the ordinary high water mark. There are no reservoirs included in this final designation for northern Mexican gartersnake.

Comment 10: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), USFS commented that the gartersnakes have strong fidelity for brumation or natal sites.

Our Response: We are not aware of any literature supporting a conclusion that the northern Mexican gartersnake has strong fidelity for brumation or natal sites. In this designation, we include some areas that capture the physical or biological features of brumation sites that have been documented in telemetry studies conducted for the species that are described in the revised proposed critical habitat rule (85 FR 23608, April 28, 2020, see “Terrestrial Space Along Streams” on pp. 85 FR 23614–23616).

Comment 11: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), a Federal agency requested more discussion related to including broad areas of terrestrial habitat in critical habitat for the northern Mexican gartersnake and that we explain why these areas are based on political rather than biological boundaries.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) and this rule, we do not include broad areas of terrestrial habitat in the critical habitat designation, and we do not base critical habitat on political boundaries (85 FR

23608, April 28, 2020, see “Overland Areas for Northern Mexican Gartersnake” on pp. 85 FR 23616–23617; and see **Regulation Promulgation**, below).

Comment 12: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), USFS commented that PBF 3 for northern Mexican gartersnake should read “amphibians and/or fishes” as opposed to “both amphibians and fishes” because some sites might have one or the other and this species could persist without having both classes of vertebrates present.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we expanded the prey base in PBF 3 to include “anurans, fishes, small mammals, lizards, and invertebrate species” to more accurately capture the northern Mexican gartersnake’s primary prey across a variety of habitats (see “Prey Base” on p. 85 FR 23614). We did not intend to imply that both classes of aquatic vertebrate species need to be present in all critical habitat. To clarify this PBF, in this rule, we revise it to read, “a combination of amphibians, fishes, small mammals, lizards, and invertebrate species such that prey availability occurs across seasons and years” (see **Regulation Promulgation**, below).

Comment 13: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), several Federal entities commented that various areas in the proposal do not currently contain the PBFs for northern Mexican gartersnakes. USFS further stated that it would be more realistic if we limited critical habitat to the areas that had the PBFs, if the PBFs are clearly defined and determinable.

Our Response: For the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we reevaluated all streams to determine which stream reaches contain PBFs. The revised proposed critical habitat rule and this rule do not include stream reaches where we determined that water flow became completely ephemeral along an otherwise perennial or spatially intermittent stream, hydrologic processes needed to maintain

streams could not be recovered, nonnative aquatic predators outnumbered native prey species, or streams were outside the elevation range. The revised proposed critical habitat rule (85 FR 23608; April 28, 2020) and this rule include areas that were occupied at the time of listing but where PBFs concerning prey availability and presence of nonnative aquatic predators are often in degraded condition and need special management (see 85 FR 23608, April 28, 2020, **Changes to Criteria Used to Identify Critical Habitat**, pp. 85 FR 23617–23623; and see **Regulation Promulgation**, below).

Comment 14: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), several Federal agencies provided lists of specific areas included in proposed critical habitat that do not have stream flow requirements defined in PBF 1A to support the northern Mexican gartersnakes or their corresponding prey species identified in PBF 3. These agencies identified reaches that lacked PBF 1A in some areas along the following streams included in the 2013 proposed critical habitat rule for northern Mexican gartersnake: Agua Fria River in the Agua Fria River Subbasin, Mule Creek in the Gila River Subbasin, and Spring Creek in the Verde River Subbasin. These areas included stream reaches where water flow became completely ephemeral along an otherwise perennial or spatially intermittent stream.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we did not include stream reaches where water flow becomes completely ephemeral along an otherwise perennial or spatially intermittent stream, and we incorporated related information received from USFS and others regarding stream flow. We incorporated stream flow information received from USFS for Little Creek in the Verde River Subbasin Unit for northern Mexican gartersnake. Based on information from USFS and others related to lack of stream flow along Spring Creek, designated critical habitat for the northern Mexican gartersnake in Spring Creek ends 4 miles upstream of its confluence with Oak Creek. The rule set that we applied in the 2020 revised proposed

critical habitat rule limited critical habitat to the known elevation range of the species and limited stream length by dispersal distance from confirmed gartersnake locations dated 1998 or later. When applied, these two factors of the rule set removed all other areas that USFS identified as not having stream flow requirements for the northern Mexican gartersnake.

Comment 15: USFS and Fort Huachuca stated that many areas included in critical habitat in the original proposed critical habitat rule (78 FR 41550; July 10, 2013) do not have PBF 4: an absence of nonnative fish species of the families Centrarchidae and Ictaluridae, bullfrogs, and/or crayfish. USFS also stated that much of proposed critical habitat may not have the capacity to ever become recolonized by the northern Mexican gartersnake due to the current and likely future conditions of these nonnative invasive species. In 2020, USFS further commented that it will be difficult if not impossible for USFS to attain this PBF on its lands that it manages because nonnative species are managed by the State and not by USFS.

Our Response: The revised proposed critical habitat rule (85 FR 23608; April 28, 2020) and this final rule include areas that were occupied at the time of listing, but areas that contain nonnative aquatic predators are often in degraded condition and require special management. While recognizing USFS concerns, these areas have the capacity to be managed to improve the condition of the PBFs for the northern Mexican gartersnake through cooperative efforts between State wildlife agencies and USFS, and these types of efforts have already successfully been undertaken by USFS and State wildlife agencies within the range of the northern Mexican gartersnake.

Comment 16: In response to the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), USFS stated that we did not provide much explanation for what might constitute special management considerations that may be needed in critical habitat, so it is not clear what types of management are likely to result in improved PBFs.

USFS commented that there should be some recognition of the potential value of restorative actions that often have short-term adverse effects but are designed to result in beneficial effects (e.g., channel restoration, prescribed fire, riparian vegetation improvements, etc.).

Our Response: In the 2020 revised proposed critical habitat rule, we stated that we were not changing any of the special management considerations from the 2013 original proposed critical habitat rule for the northern Mexican gartersnake (see 85 FR 23608, April 28, 2020, **Special Management Considerations or Protection**, p. 85 FR 23624). However, the 2013 original proposed critical habitat rule did not include recognition of the potential value of restorative actions that often have short-term adverse effects but are designed to result in beneficial effects (see 78 FR 41550, July 10, 2013, *Special Management Considerations or Protection*, pp. 78 FR 41555–41556). To address this comment and the information lacking in the 2013 original proposed critical habitat rule, we have added this information to the discussion of special management considerations in this final rule.

Comment 17: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), USFS commented that the portion of the Gila River upstream of the Cliff-Gila Valley included in proposed critical habitat is far removed from any known, post-1980 records for the northern Mexican gartersnake species and should be removed from critical habitat.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we reviewed gartersnake occupancy to determine that a stream, stream reach, or lentic water body was occupied at the time of listing for the northern Mexican gartersnake if it is within the historical range of the species, contains PBFs for the species (although the PBFs concerning prey availability and presence of nonnative aquatic predators are often in degraded condition), and has a last known record of occupancy in

1998 or later (see Occupancy Records, 85 FR 23608, p. 23617-23619) (see **Criteria Used To Identify Critical Habitat**). We also delineated upstream and downstream critical habitat boundaries of a stream reach at 2.2 mi (3.6 km) from a known gartersnake observation record (see 85 FR 23608, April 28, 2020, *Stream Length*, pp. 85 FR 23619–23623). As a result, the Gila River upstream of the Cliff-Gila Valley is not included in this final critical habitat designation for the northern Mexican gartersnake (See **Criteria Used to Identify Critical Habitat**).

Comment 18: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), a Federal agency requested that we consider adding five aquatic conservation sites within the San Pedro Riparian National Conservation Area (NCA) to critical habitat for the northern Mexican gartersnake as they may provide habitat for the species.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we determined that a stream, stream reach, or lentic water body was occupied at the time of listing for the northern Mexican gartersnake if it is within the historical range of the species, contains PBFs for the species (although the PBFs concerning prey availability and presence of nonnative aquatic predators are often in degraded condition), and has a last known record of occupancy in 1998 or later. The five aquatic conservation sites within the San Pedro Riparian NCA do not meet these requirements because they do not have a record of occupancy in 1998 or later and, therefore, are not included in this final critical habitat designation.

Comment 19: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), a Federal agency requested we clarify the downstream boundary of the Tonto Creek Unit to a specific fixed elevation no lower than the maximum pool of Roosevelt Lake. In response to the revised proposed critical habitat rule (85 FR 23608;

April 28, 2020), they stated that we incorrectly identified the spillway elevation of Roosevelt Lake as 2,120 ft and that it should be 2,100 ft.

Our Response: Based on further inquiry with Bureau of Reclamation (Reclamation), in this rule we are changing the downstream terminus of Tonto Creek to 2,151 ft (656 meters (m)) because areas below this elevation do not meet the definition of critical habitat for the northern Mexican gartersnake under normal reservoir operations.

Comment 20: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), USFS stated that proposed critical habitat will affect numerous livestock grazing allotments on the Tonto National Forest. In addition, another Federal agency stated concerns about current and potential future management of public lands within proposed designated critical habitat areas, including grazing and off-highway vehicle (OHV) use. There is a grazing permit renewal under review that would allow for grazing October through January within the Palmerita Ranch allotment on riparian and upland areas. The agency also stated that there is a special recreational permit issued for an annual 3-day OHV poker run event, which would occur partially on navigable washes on Federal lands.

Our Response: With respect to livestock grazing and OHV use in areas of critical habitat, Federal agencies that authorize, carry out, or fund actions that may affect listed species or designated critical habitat are required to consult with us to ensure the action is not likely to jeopardize listed species or destroy or adversely modify designated critical habitat. This consultation requirement under section 7 of the Act is not a prohibition of Federal agency actions, rather it is a means by which they may proceed in a manner that avoids jeopardy or adverse modification. Even in areas absent designated critical habitat, if the Federal agency action may affect a listed species, consultation is still required to ensure the action is not likely to jeopardize the species. Because the areas designated as critical habitat are occupied and consultation will be required to meet the jeopardy

standard, the impact of the critical habitat designation should be minimal and administrative in nature.

Comment 21: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), USFS requested we define disturbance thresholds for actions “that would significantly increase sediment deposition or scouring within the stream channel” such as vegetation treatments, prescribed fire, and wildfire suppression. USFS also requested we include language addressing the scope, scale, and duration of actions “that would alter water chemistry beyond the tolerance limits of a gartersnake prey base” and actions “that would remove, diminish, or significantly alter the structural complexity of key natural structural habitat features in and adjacent to critical habitat.” USFS stated that these actions are extremely broad in scope and do not differentiate short-term impacts versus true long-term, more permanent impacts that could result in adverse modification.

Our Response: The purpose of the designation of critical habitat to identify those areas critical to the conservation of the species. For the public and section 7 practitioners to understand the types of actions considered to have potential effects on designated critical habitat, we generally identify those types of actions that could potentially result in adverse modification of designated critical habitat. The actual effects of a proposed action on designated critical habitat are dependent on many factors related to both the action being proposed and the project area. Therefore, we cannot determine and include thresholds for adverse modification in this rule. The appropriate process for that determination is the section 7 process, during which specific factors within the proposed action and conditions within the project area can be evaluated.

Comment 22: In response to the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), USFS commented that “[a]ctions and structures that would physically block movement of gartersnakes and their prey species” should not include a discussion of predatory species. USFS argued that predatory species should not be

included because the presence of nonnative aquatic predatory species in a waterbody reduces population viability, which is considered under actions included in those “that would directly or indirectly result in the introduction, spread, or augmentation of predatory nonnative species in gartersnake habitat.”

Our Response: Including this language with regard to nonnative aquatic predatory species within the description of actions and structures that would block the movements of gartersnakes and their prey species, as well as within the description of actions that would result in the introduction, spread, and augmentation of predatory nonnative species, is important to clarify two different types of effects that result from similar actions. The presence of such nonnative aquatic predatory species can both act as a barrier to movement and reduce habitat quality due to presence of nonnative aquatic predatory species.

Comment 23: In response to both the original proposed critical habitat rule (78 FR 41550; July 10, 2013) and the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), the U.S. Army installation at Fort Huachuca requested exclusion of areas outside the installation along portions of the San Pedro and Babocomari Rivers that fall within the San Pedro Riparian NCA in the Upper San Pedro River Subbasin Unit for the northern Mexican gartersnake. Fort Huachuca stated that we did not conduct an adequate national security analysis as required by section 4(b)(2) of the Act and that the designation could require additional water mitigation requirements and mission restrictions that would negatively impact national security. Fort Huachuca also stated that the proposed critical habitat outside this area is more than adequate for recovery of this species.

Our Response: For exclusion of an area from critical habitat designation based on national security, we look to our Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016), which outlines measures

we consider when excluding any areas from critical habitat. We reviewed the commenter's request and applied the Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016). Based on this analysis, we determined that the area should not be excluded from this final rule due to national security. Please see **Exclusions** (*Exclusions Based on Impacts on National Security and Homeland Security*), below, for our analysis of the Fort Huachuca request for exclusion for lands within the San Pedro Riparian NCA.

Comment 24: In response to the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), U.S. Customs and Border Protection (CBP) under the Department of Homeland Security (DHS) requested that the Roosevelt Reservation portion of critical habitat in Unnamed Drainage and Pasture 9 Tank Subunit, Unnamed Drainage and Sheehy Spring Subunit, and Santa Cruz River Subunit within the Upper Santa Cruz River Subbasin Unit along the U.S./Mexico border be considered for exclusion under section 4(b)(2) of the Act for national security reasons and for being exempt from environmental regulations (DHS 2020, entire). The Roosevelt Reservation is a 60-ft (18-m) wide strip of land owned by the Federal Government along the U.S. side of the U.S./Mexico border in California, Arizona, and New Mexico.

Our Response: We have reviewed CBP's request and have excluded the 60-ft (18-m) area of the Roosevelt Reservation from this final critical habitat designation. Please see **Exclusions** (*Exclusions Based on Impacts on National Security and Homeland Security*), below, for our analysis of the CBP's request for exclusion for border units within the Roosevelt Reservation.

Comment 25: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), a Federal agency stated that the portion of the Bill Williams River National Wildlife Refuge (NWR) included in the original proposed critical habitat does not provide habitat for the northern Mexican gartersnake and should be excluded from

critical habitat. In response to the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), the same agency requested exclusion of all critical habitat within the 914,200-acre Lower Colorado River Multi-Species Conservation Program (MSCP) planning area and off-site conservation areas. This includes the entire Bill Williams River Subunit in the Bill Williams River Subbasin Unit and the Lower Colorado River Unit. The agency stated that designating critical habitat in these two areas will create an unnecessary administrative burden, as actions to maintain the existing flood control and water delivery infrastructure would require additional consultation.

Our Response: As a result of the Federal agency and other public comments on the original proposed critical habitat rule (78 FR 41550; July 10, 2013), we revised our rule set for determining the extent of the critical habitat for all critical habitat units in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020). We determined that a stream, stream reach, or lentic water body was occupied at the time of listing for the gartersnake if it is within the historical range of the species, contains PBFs for the species (although the PBFs concerning prey availability and presence of nonnative predators are often in degraded condition), and has a last known record of occupancy in 1998 or later. We also delineated upstream and downstream critical habitat boundaries of a stream reach at 2.2 mi (3.6 km) from a known gartersnake observation record (see 85 FR 23608, April 28, 2020, *Stream Length*, pp. 85 FR 23619–23623). As a result of our review of occupancy and implementation of our rule set for stream length, the Bill Williams NWR is not included in this final critical habitat designation for the northern Mexican gartersnake.

With respect to the request for excluding all areas from critical habitat within the 914,200-acre Lower Colorado River MSCP planning area and off-site conservation areas, the Lower Colorado River Unit and Bill Williams River Subunit have been excluded from this final designation based on conservation and management of some areas and

thus are not addressed further here (see **Exclusions**, *Private or Other Non-Federal Conservation Plans or Agreements and Partnerships, in General*, below).

Comment 26: The U.S. Small Business Administration and other commenters stated that we should consider the full scope of economic impacts to small entities and conduct a thorough Regulatory Flexibility Act analysis for critical habitat rules.

Our Response: Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), Federal agencies are only required to evaluate the potential incremental impacts of a rulemaking on directly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the agency is not likely to adversely modify critical habitat. Therefore, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Under these circumstances, it is our position that only Federal action agencies will be directly regulated by this designation. Therefore, because Federal agencies are not small entities, we certify that the proposed critical habitat rule will not have a significant economic impact on a substantial number of small entities (see **Required Determinations**, below). Thus, no regulatory flexibility analysis is required.

Comment 27: The U.S. Small Business Administration commented that we should continue to engage with stakeholders early in the process and consider public comments.

Our Response: Stakeholder engagement is important to balancing the long-term conservation of sensitive species and their habitats with the interests of stakeholders and the needs of the public. However, we are required to designate critical habitat for endangered and threatened species where we find the designation to be both prudent and determinable, as is the case with the northern Mexican gartersnake. In our development

of critical habitat, we consider designating those areas occupied at the time of listing that contain the PBFs essential to the conservation of the species; this consideration is not based on land ownership, unless limiting the designation to only Federal lands would provide for the conservation of the species. In our original proposed critical habitat rule (78 FR 41550; July 10, 2013) and revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we solicited information from the public regarding potential exclusions of areas based on management plans or other conservation efforts including partnerships, as well as other information related to the species and potential impacts of designating critical habitat. This section of this final rule outlines our consideration of public comments received on both proposed rules.

State Comments

Comment 28: Arizona Game and Fish Department (AGFD) commented that while they recognize the intent of our use of the term “predatory sportfish,” it is important to point out that all sportfish are predatory, as are all of our native fishes (i.e., they all prey on other organisms) and all interactions with sportfish are not negative. Further, not all sportfish or native species eat snakes.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we used the term “predatory sportfish” to explain how we delineated critical habitat: “We identified and removed stream reaches where stocking or management of predatory sportfish is a priority and is conducted on a regular basis.” In this document, we have removed the term “predatory sportfish” and replaced it with “nonnative fish species of the families Centrarchidae and Ictaluridae,” so that it is consistent with the description of species used in the PBF related to nonnative aquatic predators.

Comment 29: In response to our original proposed critical habitat rule (78 FR 41550; July 10, 2013), New Mexico Department of Game and Fish (NMDGF) commented that there are no post-2000 records for northern Mexican gartersnake on its

properties within or adjacent to the Upper Gila River Subbasin Unit. These properties include the Red Rock Wildlife Management Area, which is a public fishing and recreation area; the Bill Evans Fishing Area, which is a public fishing site; and the Heart Bar Wildlife Area, which is a public fishing and recreation area.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we reviewed northern Mexican gartersnake occupancy to determine that a stream, stream reach, or lentic water body was occupied at the time of listing for the species if it is within the historical range of the species, contains PBFs for the species (although the PBFs concerning prey availability and presence of nonnative aquatic predators are often in degraded condition), and has a last known record of occupancy in 1998 or later. We also delineated upstream and downstream critical habitat boundaries of a stream reach at 2.2 mi (3.6 km) from a known northern Mexican gartersnake observation record (see 85 FR 23608, April 28, 2020, *Stream Length*, pp. 85 FR 23619–23623). As a result of our review of occupancy and implementation of our rule set for stream length, the Gila River upstream of the Cliff-Gila Valley is not included in this final critical habitat designation for northern Mexican gartersnake; therefore, this designation does not contain any NMDGF properties.

Comment 30: AGFD stated that the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) is adequate for recovery of the northern Mexican gartersnake and that there are some areas that were occupied historically but from which the species has been extirpated. AGFD will continue the recovery efforts of reintroducing northern Mexican gartersnakes back into historically occupied habitats to contribute to recovery, regardless of their current occupied status or their critical habitat designation.

Our Response: We will only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied at the time of listing by the species would be inadequate to ensure the conservation of the species. In addition, for

an unoccupied area to be considered essential, we must determine that there is a reasonable certainty both that the area will contribute to the conservation of the species and that the area contains one or more of the PBFs essential to the conservation of the species. At this point in time, we do not know what areas within the species' historical range will contribute to the conservation of the species. We appreciate the AGFD's partnership in the conservation and recovery of the northern Mexican gartersnake.

Comment 31: Both AGFD and NMDGF stated concerns with the *Application of the "Adverse Modification" Standard* discussion in the revised proposed critical habitat rule (85 FR 23608, April 28, 2020, pp. 85 FR 23633–23634). AGFD pointed out that in the same discussion in the original proposed critical habitat rule (78 FR 41550, July 10, 2013, pp. 78 FR 41576–41577), we discuss activities "that may affect critical habitat, when carried out, funded, or authorized by a Federal agency should result in section 7 consultation," but in the 2020 revised proposed critical habitat rule, we discuss the same activities but change the "may affect critical habitat" to "likely to destroy or adversely modify critical habitat." AGFD recommended that in the final rule we use the same language in this discussion that we used in the 2013 original proposed critical habitat rule. AGFD went on to express concern that the 2020 revised proposed critical habitat rule essentially says that the effect has already been determined that any of these activities will destroy or adversely modify critical habitat.

Our Response: In this rule's *Application of the "Adverse Modification" Standard* discussion, below, we include actions that could cause adverse effects to critical habitat, and not necessarily cause adverse modification to critical habitat, so that the public and section 7 practitioners can understand the types of actions we consider to have potential effects to designated critical habitat. The actual effects of a proposed action on designated critical habitat are dependent on many factors related to both the action being proposed and the project area. Therefore, we cannot determine and include thresholds for adverse

modification in this rule. The appropriate process for that determination is the section 7 process, during which specific factors within the proposed action and conditions within the project area can be evaluated.

Comment 32: Both AGFD and NMDGF stated concerns with some activities included in the analysis of the “adverse modification” standard because the activities are valuable to the restoration and recovery of native species even if they have temporary impacts to critical habitat. AGFD and NMDGF expressed concern about the time threshold we included in the *Application of the “Adverse Modification” Standard* discussion to determine that actions that would deliberately remove, diminish, or significantly alter the native or nonnative, soft-rayed fish component of the prey base within occupied habitat for a period of 7 days or longer would reach an adverse modification determination. AGFD recommended removing language that limits fish because the bulk of the northern Mexican gartersnake’s diet consists of frogs and not fish. AGFD further explained that stream renovation projects are needed to ensure that a healthy native fish community exists and that gartersnakes will also thrive. Chemical renovations can take longer than 7 days for the chemicals to dissipate to levels that are safe for native fish, or multiple treatments may need to be conducted to be effective. NMDGF requested removing fish barriers, water diversion, fish habitat restoration, and chemical treatments from the *Application of the “Adverse Modification” Standard* discussion in the final rule.

Our Response: In this rule’s *Application of the “Adverse Modification” Standard* discussion, below, we acknowledge that some conservation actions will have short-term adverse effects but will ultimately result in long-term benefits to gartersnake critical habitat. The actual effects of a proposed action of designated critical habitat are dependent on many factors related to both the action being proposed and the project area. The appropriate process for that determination is the section 7 process, during which

specific factors within the proposed action and conditions within the project area can be evaluated. We understand that the diet of the northern Mexican gartersnake is widely variable. Therefore, paragraph (7) under *Application of the “Adverse Modification” Standard* in the 2020 revised proposed rule specifically only pertained to narrow-headed gartersnakes, which are no longer included in this rule. Therefore, we removed paragraph (7) from this final rule.

Comment 33: AGFD recommended excluding private and non-Federal lands enrolled in Chiricahua leopard frog (*Rana chiricahuensis*) or Gila topminnow (*Poeciliopsis occidentalis*) and desert pupfish (*Cyprinodon macularius*) safe harbor agreements from northern Mexican gartersnake critical habitat. AGFD stated that these private landowners are important conservation partners that are already contributing to native aquatic species conservation and recovery that can benefit the northern Mexican gartersnake. AGFD further stated that AGFD is committed to advancing recovery of this species on its properties that we also considered for exclusion, including Bubbling Ponds and Page Springs fish hatcheries adjacent to Oak Creek and Planet Ranch property on the Bill Williams River.

Our Response: Based on our consideration of proposed exclusions and land management information received from AGFD, we found that Bubbling Ponds and Page Springs fish hatcheries, Planet Ranch, and private and non-Federal lands enrolled in Chiricahua leopard frog or Gila topminnow and desert pupfish safe harbor agreements are all managed in ways that promote conservation and restoration of habitat that is beneficial to the northern Mexican gartersnake. Additionally, the exclusion of these areas is likely to be beneficial in maintaining working partnerships with AGFD and private landowners. As a result of our exclusion/inclusion benefits analysis, we have determined it appropriate to exclude these areas from the designation. See **Exclusions**, *Private or*

Other Non-Federal Conservation Plans or Agreements and Partnerships, in General, below.

Comment 34: New Mexico Department of Agriculture (NMDA) expressed support for excluding private lands owned by Freeport-McMoran within the U-Bar Ranch property along Duck Creek and the Gila River from critical habitat for the northern Mexican gartersnake. NMDA stated that voluntary conservation planning and actions on the property are adequate for conserving the gartersnake.

Our Response: Consideration of possible exclusions from critical habitat are in our discretion and generally follow our Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016). With respect to the Upper Gila River Subbasin Unit for the northern Mexican gartersnake, we determined that that the benefits of exclusion do not outweigh the benefits of inclusion. See **Exclusions, Private or Other Non-Federal Conservation Plans or Agreements and Partnerships, in General,** below, for our discussion of private lands owned by Freeport-McMoran.

Comment 35: NMDA commented that we should reconsider the value of critical habitat if we cannot identify a case in which consultation would require additional conservation measures.

Our Response: We are required to designate critical habitat for listed species if we find that the designation is prudent and determinable, as we did for the northern Mexican gartersnake, regardless of whether we can foresee project modifications that may be required.

Comment 36: NMDGF requested that we exclude developed, humanmade fish migration barrier structures from critical habitat because including them will hinder conservation efforts for native fish and snakes by delaying construction and maintenance efforts of these structures.

Our Response: When determining critical habitat boundaries, we made efforts to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack the PBFs. The humanmade fish barriers are in-water structures that fall within the boundaries of habitats used by northern Mexican gartersnakes. Because of this and the limitations of map scale, any developed lands, such as constructed fish barriers, left inside critical habitat boundaries are not considered critical habitat because they lack the necessary PBFs. However, a Federal action involving the fish barriers, such as maintenance, may trigger section 7 consultation with respect to critical habitat or the prohibition of adverse modification if the specific action would affect the PBFs in surrounding critical habitat.

Comment 37: The New Mexico Interstate Stream Commission commented that the Service must complete an environmental impact statement (EIS) for designating critical habitat.

Our Response: NEPA dictates that the Service determine the appropriate level of NEPA review (40 CFR 1501.3). The Service completed an environmental assessment (EA) to determine whether an EIS was necessary or if a finding of no significant impact (FONSI) could be determined. The Service released a draft EA that was available for public comment from December 18, 2020, to January 16, 2021, on the Arizona Ecological Services Field Office website; we received five comments on the draft EA. After addressing the public comments received, the Service finalized the EA and found that designating critical habitat for the northern Mexican gartersnake would not result in significant impacts to the environment. A copy of the final EA and FONSI is available at <http://www.regulations.gov> at Docket No. FWS–R2–ES–2020–0011. Therefore, the appropriate NEPA process was completed, and an EIS is not required.

Tribal Comments

In accordance with our requirements to coordinate with Tribes on a government-to-government basis, we solicited information from the following 17 Tribes regarding the designation of critical habitat for the northern Mexican gartersnake: Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, Fort McDowell Yavapai Nation, Fort Mojave Indian Tribe, Gila River Indian Community, Hopi Tribe, Hualapai Tribe, Mescalero Apache Tribe, Pascua Yaqui Tribe, Salt River Pima-Maricopa Indian Community, San Carlos Apache Tribe, Tohono O'odham Nation, Tonto Apache Tribe, White Mountain Apache Tribe, Yavapai-Apache Nation, and Yavapai-Prescott Indian Tribe. While all of these tribes may have interest in lands included in proposed critical habitat for northern Mexican gartersnake, the only Tribal land included in the revised proposed critical habitat designation was land owned by the Yavapai-Apache Nation. We also met with representatives of the Gila River Indian Community and Yavapai-Apache Nation to discuss the proposed designation. The Gila River Indian Community expressed concern regarding potential effects that critical habitat may have on water allocation. The Yavapai-Apache provided revisions to ownership of their lands, expressed concern of economic impacts from designated critical habitat, and requested the Yavapai-Apache Nation be excluded from the designation.

Comment 38: The Gila River Indian Community expressed concern about how designation of critical habitat for the northern Mexican gartersnake on the Bill Williams River might affect their Central Arizona Project water allocation, which is diverted downstream along the Colorado River.

Our Response: For critical habitat off Tribal lands, we do not anticipate the Central Arizona Project water allocation to Gila River Indian Community to be impacted by this designation of critical habitat because we are excluding the Bill Williams River from critical habitat based on the Lower Colorado River MSCP Habitat Conservation Plan (LCR MSCP 2004, entire). In addition, the economic analysis outlines the

substantial baseline protections currently afforded the northern Mexican gartersnake throughout the designation and has determined that the impacts of critical habitat will be minimal (See **Exclusions**, *Private or Other Non-Federal Conservation Plans Related to Permits Under Section 10 of the Act*).

Comment 39: The Yavapai-Apache Nation requested that their lands be excluded from the designation of critical habitat based on their management and conservation of northern Mexican gartersnake habitat, because the designation would infringe on Tribal sovereignty and directly interfere with Tribal self-government, and because the designation would have a disproportionate economic impact on the Yavapai-Apache Nation. The Yavapai-Apache Nation further stated that our draft economic analysis failed to analyze the unique economic impacts of the potential designation of Tribal land and requested us to revise the proposed rule to consider the types of Tribal economic activities likely to occur and likely to be affected by the critical habitat designation.

Our Response: We have reviewed the request for exclusion from the Yavapai-Apache Nation and excluded all Tribal lands from the final designation under section 4(b)(2) of the Act (See **Exclusions**, below). Because all Tribal lands have been excluded from this final critical habitat designation, any required conservation activities on Tribal lands will be based solely on the listing of the northern Mexican gartersnake, not critical habitat on Tribal lands. The economic analysis outlines the substantial baseline protections currently afforded to the northern Mexican gartersnake throughout the designation and has determined that the impacts of critical habitat will be minimal.

Public Comments

Comment 40: Several commenters stated their view that designating critical habitat for the northern Mexican gartersnake is not prudent because disclosing where individuals can be found would increase illegal taking of the species. Several commenters also stated that designating critical habitat is not prudent because most of the stream

reaches included in the proposed designation have already been designated as critical habitat for other listed species. Other commenters stated that designating critical habitat for the northern Mexican gartersnake is not prudent because there are insufficient populations in the United States and the species primarily occurs in Mexico.

Our Response: As discussed in the final listing rule (79 FR 38678; July 8, 2014), there is no imminent threat of take attributed to illegal collection for this species, and identification and mapping of critical habitat is not expected to initiate any such threat.

Additionally, criteria used to determine if designation of critical habitat for the northern Mexican gartersnake is prudent pursuant to our regulations, 50 CFR 424.12(a)(1), may differ from criteria used to designate critical habitat for other listed species. Therefore, because none of the circumstances enumerated in our regulations at 50 CFR 424.12(a)(1) has been met and because there are no other circumstances we have identified for which this designation of critical habitat would not be prudent, we have determined that the designation of critical habitat is prudent for the species.

In development of the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we used the best scientific and commercial information available. In that revised proposed rule, we reassessed occupancy at the time of listing by reviewing all records for the northern Mexican gartersnake that we used in our original proposed critical habitat rule (78 FR 41550; July 10, 2013) in conjunction with expected survivorship of the species. We also used subsequent surveys in areas that had no detection of the species, and reviewed changes in threats that may have prevented occupancy at time of listing. We determined that the best available information reflecting occupancy at the time of listing supports a more recent date of records since 1998, which includes areas within the United States (see **Criteria Used To Identify Critical Habitat**). This and other information represent the best scientific and commercial data available and led us to determine areas of occupancy at the time of listing. Our review of

the best scientific and commercial data available support the conclusion that the designation of critical habitat is prudent and determinable for the northern Mexican gartersnake.

Comment 41: Multiple commenters stated that the available data are insufficient to identify the species' needs and impacts from wildfires in order to determine areas for critical habitat.

Our Response: In development of the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we used the best scientific and commercial information available. We have sufficient information to determine the areas essential to the conservation of the species (i.e., critical habitat) as documented in the 2020 revised proposed rule. In addition to reviewing gartersnake-specific survey reports, we also focused on survey reports and heritage data for fish and amphibians from State wildlife agencies, as they captured important data on the existing community ecology that affects the status of the northern Mexican gartersnake. In addition to species data sources, we used publicly available geospatial datasets depicting water bodies, stream flow, vegetation type, and elevation to identify critical habitat areas. We reviewed the available information pertaining to the biological needs of the species and habitat characteristics where the species is located. This and other information represent the best scientific and commercial data available and led us to conclude that the designation of critical habitat is determinable for the northern Mexican gartersnake.

As discussed in the final listing rule (79 FR 38678; July 8, 2014), landscape-scale wildfires have impacted the species and its habitats. We understand that wildfires can cause sedimentation that can reduce water quality and prey availability for the northern Mexican gartersnake, and we included areas in critical habitat that had records of the species from 1998 to 2019, but that may need special management to maintain PBFs 1 and 3 as a result of recent or future wildfires.

Comment 42: Two commenters stated that ephemeral reaches of streams, as well as intermittent streams, can provide habitat for northern Mexican gartersnakes. Gartersnakes use them on a seasonal basis, and they may have lower densities of nonnative aquatic species. Therefore, they should be included in the critical habitat designation.

Our Response: In development of the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we clarified the spectrum of stream flow regimes that provide stream habitat for the northern Mexican gartersnake based on scientifically accepted stream flow definitions (Levick *et al.* 2008, p. 6; Stromberg *et al.* 2009, p. 330). We define a “spatially intermittent” stream as a stream that is interrupted, perennially interrupted, or spatially intermittent; has perennial flow occurring in areas with shallow bedrock or high hydraulic connectivity to regional aquifers; and has ephemeral to intermittent flow occurring in areas with deeper alluvial basins or greater distance from the headwaters (Stromberg *et al.* 2009, p. 330). The spatial patterning of wet and dry reaches on spatially intermittent streams changes through time in response to climatic fluctuations and to human modifications of the landscape (Stromberg *et al.* 2009, p. 331).

We include spatially intermittent streams, as well as entirely ephemeral streams, in critical habitat for the northern Mexican gartersnake. We explain that streams that have perennial or spatially intermittent flow can provide stream habitat for the species. Ephemeral reaches of streams can serve as habitat for northern Mexican gartersnakes and are included in critical habitat as PBF 1 in streams with spatially intermittent flow if such reaches are between perennial sections of a stream that were occupied at the time of listing. We also include entirely ephemeral channels in critical habitat as PBF 7 if they connect perennial or spatially intermittent perennial streams to lentic wetlands in southern Arizona where water resources are limited. Streams that have ephemeral flow over their entire length are considered critical habitat when they may serve as corridors

between perennial streams and lentic aquatic habitats, including springs, cienegas, and natural or constructed ponds that were occupied at the time of listing due to the propensity for higher prey densities where water conveys.

Comment 43: One commenter stated that we should maintain a shoreline component as part of the PBFs that identify critical habitat, and we should include human-modified features such as stock tanks. They stated their view that eliminating the shoreline component could result in improperly leaving out habitats that northern Mexican gartersnakes use because they span the transition between upland riparian and in-stream habitats.

Our Response: We removed the term “shoreline habitat” because shorelines fluctuate. Instead, we are focusing on the substrate. The key to the original primary constituent element for “shoreline habitat” was the substrate itself, not the fluctuating shoreline. The revised PBFs 1 and 6 focus on the organic and natural inorganic structural features important to the northern Mexican gartersnake that fall within the stream channel or lentic water body and still encompass the transition between in-stream habitat and riparian habitat.

Constructed ponds, including stock tanks, are still included in critical habitat for the northern Mexican gartersnake if they are within the historical range of the species, contain all PBFs for the species (although the PBFs concerning prey availability and presence of nonnative aquatic predators are often in degraded condition), and have a last known record in 1998 or later. Please see our response to *Comment 7*, above, for a summary of these sites.

Comment 44: One commenter stated that there are no currently available data on the effects of pollutants on the recruitment of northern Mexican gartersnakes; therefore, including PBF 1D for the northern Mexican gartersnake, which concerns water quality with low to zero levels of pollutants, is not using the best available science.

Our Response: We do not have specific data related to effects of water pollutants on the recruitment of the northern Mexican gartersnake. Therefore, in this rule, we have amended the relevant PBF to read as follows: “Water quality that meets or exceeds applicable State surface water quality standards” (For more information, see **Physical or Biological Features Essential to the Conservation of the Species**, below). Although water quality is not identified as a threat to the northern Mexican gartersnake, it is a threat to its prey base. Water quality that is absent of pollutants or has low levels of pollutants is needed to support the aquatic prey base for the northern Mexican gartersnake. State water quality standards identify levels of pollutants required to maintain communities of organisms that have a taxa richness, species composition, and functional organization that includes the aquatic prey base of the northern Mexican gartersnake.

Comment 45: We received a variety of comments regarding the definition of the lateral extent of critical habitat for the northern Mexican gartersnake in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020). Several commenters supported the use of PBFs to define the lateral extent of critical habitat for the northern Mexican gartersnakes in the 2020 revised proposed rule instead of using an arbitrary 600-ft straight-line distance from “bankfull width” that we used in the original proposed critical habitat rule (78 FR 41550; July 10, 2013). Comments suggested limiting the riparian zone defined in PBFs by a straight-line distance from water features based on the maximum distance the species has been recorded from water to define lateral extent of the critical habitat for the northern Mexican gartersnake. Another commenter stated by removing the 600-ft (183-m) lateral extent from the bankfull line of streams to only include riparian areas does not take into account the type of habitat that the gartersnake uses for dispersal, brumation, and foraging. Because northern Mexican gartersnakes may move 0.85 mi (1.2 km) overland during monsoon season, this distance should be

incorporated as a minimum lateral distance on both sides of stream bankfull stage. Additionally, another commenter suggested using as large of a buffer as possible of terrestrial habitat for northern Mexican gartersnakes due to the variety of environmental conditions found within remaining populations of the species.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we explained that although northern Mexican gartersnakes have been found in a variety of vegetation types within the riparian zone (i.e., grasses, shrubs, and wetland plants), the underlying characteristic of this habitat needed by the gartersnake appears to be dense vegetation or other natural structural components that provide cover for the species. Size of the riparian zone and composition of plants within the riparian zone varies widely across the range of the northern Mexican gartersnake, and studies have not been conducted throughout its entire range. The width of critical habitat for the northern Mexican gartersnake along streams varies from approximately 50 to 7,000 ft (15 to 2,134 m). Because the width of wetland and riparian zone varies along and among streams, and some streams have little to no riparian habitat but have wetland habitat that includes some terrestrial components, delineating these areas rather than delineating a set distance from the stream channel better captures the underlying characteristics of terrestrial habitat for the northern Mexican gartersnake. All of these areas are within the known distance northern Mexican gartersnakes have been recorded from water (85 FR 23608, April 28, 2020, see “Terrestrial Space Along Streams” on pp. 85 FR 23614–23616).

As explained in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), terrestrial habitat adjacent to the stream channel that includes riparian vegetation, small mammal burrows, boulder fields, rock crevices, and downed woody debris provides areas for thermoregulation, shelter, foraging opportunities, brumation, and protection from predators. This terrestrial habitat as defined in PBF 1C is not meant to provide dispersal habitat. Dispersal habitat is captured by stream lengths included in critical

habitat and includes all known maximum longitudinal lengths of home ranges for the species (see 85 FR 23608, April 28, 2020, *Stream Length*, pp. 85 FR 23619–23623).

As defined, PBF 1C captures all known locations of northern Mexican gartersnakes outside of water in streams that are not ephemeral. The northern Mexican gartersnake found 3,937 ft (1,200 m) straight line distance from a perennial water source during monsoon season mentioned by the commenter was located in the floodplain of an intermittent channel. This channel is included in critical habitat. In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we also explain that northern Mexican gartersnakes have not been detected in overland areas outside of stream floodplains, and while they likely use these areas while moving between habitats, specific habitat attributes in these areas that are essential to the snakes have not been identified (see 85 FR 23608, April 28, 2020, “Overland Areas for Northern Mexican Gartersnake,” pp. 85 FR 23616–23617).

Comment 46: One commenter stated that we should determine occupancy at the time of listing (2014) from 1980 to today, as was done in the original proposed critical habitat rule (78 FR 41550; July 10, 2013), rather than 1998 to today, which was done in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020). Repeated discoveries of populations of northern Mexican gartersnakes that were thought to be lost or were unknown indicates using 1980 as the earliest year to determine occupancy at the time of listing is therefore more appropriate. A lack of documentation of occupancy reflects incomplete survey effort than true non-occupancy.

Our Response: As explained extensively in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), although it is possible that northern Mexican gartersnakes are still extant in areas where they were detected only during the 1980s or prior, we have determined that the best available information reflecting occupancy at the time of listing supports a more recent date of records since 1998.

Based on our analyses in the listing rule (79 FR 38678; July 8, 2014), we conclude that there has been a significant decline in the species over the past 50 years. This decline appeared to accelerate during the two decades immediately before listing occurred. From this observation, we conclude that many areas that were occupied by the species in surveys during the 1980s are likely no longer occupied because those populations have likely disappeared. To determine where loss of populations was most likely, we reviewed survey efforts after 1989 that did not detect northern Mexican gartersnakes in some of the areas included in the original proposed critical habitat rule (78 FR 41550; July 10, 2013). All of the surveys conducted since the 1980s that were considered included at least the same amount or more search effort than those surveys that detected the species in the 1980s. Since 1998, researchers have detected northern Mexican gartersnakes in many areas where they were found in the 1980s, and this includes some areas where they had not been found prior to the 2014 final listing rule (see **Criteria Used To Identify Critical Habitat**). An increase in a species' detection information often occurs as a result of a species being listed as an endangered or threatened species, due increased survey effort spurred by to consultation requirements under section 7, as well as recovery actions or State coordination efforts under section 6, of the Act. Additional occupancy information is also sometimes obtained as a result of academic research on a species. Because these areas were occupied at the time of listing, we have included these areas in critical habitat (see **Criteria Used To Identify Critical Habitat**).

Comment 47: Multiple commenters suggested we consider using longer stream lengths to determine gartersnake occupancy. A species might use a stream's entire wetted length, rather than just certain reaches, and the northern Mexican gartersnake had previously been connected in large stretches of river that are part of high-quality, contiguous riparian habitat.

Our Response: In the original proposed critical habitat rule (78 FR 41550; July 10, 2013), we included the entire stream length of a perennial or intermittent stream if it had at least one known record for the northern Mexican gartersnake and at least one record of a native prey species present. In doing so, we included many areas that were not within the known range of the species, did not have records of the species, or did not contain the PBFs. For the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we reevaluated all streams based on comments and reports on water availability, prey availability, and surveys to determine which reaches contain the PBFs.

In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) and this final rule, critical habitat includes occupied streams or stream reaches within the historical range with survey records of the northern Mexican gartersnake dated from 1998 to 2019 that have retained the necessary PBFs that will allow for the maintenance and expansion of existing populations. We placed outer boundaries on the portion of a stream that is considered occupied. We identified the most upstream and downstream records of the northern Mexican gartersnake along each continuous stream reach determined by presence of PBFs, and we extended the stream reach to include a dispersal distance of 2.2 mi (3.6 km). After identifying the stream reaches that meet the above parameters, we then connected those reaches with areas between that have the PBFs. We consider these areas between survey records occupied because the species occurs upstream and downstream and multiple PBFs are present that allow the species to move through these stream reaches.

Comment 48: One commenter stated that critical habitat should include areas where native prey is limited and/or where nonnative species are present, for both occupied and unoccupied critical habitat, because northern Mexican gartersnakes can survive with low natural prey populations and the presence of nonnatives. Another commenter stated that we should not exclude stream reaches where other Federal, State,

Tribal, or private entities may stock predatory sportfish regularly or as needed, because recovery of listed species should be prioritized in those areas.

Our Response: This critical habitat designation includes many areas that are occupied by the northern Mexican gartersnake, where native prey is limited, and where nonnative species that prey on gartersnakes are present. Please see **Final Critical Habitat Designation**, below, for unit descriptions, including why units meet the definition of critical habitat for the northern Mexican gartersnake.

Areas subject to stocking of predatory sportfish are not occupied by the northern Mexican gartersnake. We have not identified any unoccupied areas that meet the definition of critical habitat. Please see our response to *Comment 50*, below.

Comment 49: One commenter stated that the gartersnake is currently distributed in stream reaches that are dominated by nonnative vertebrates and crayfish; therefore, the best available science does not support excluding areas as critical habitat based on an abundance of nonnative aquatic predators.

Our Response: We acknowledge that the northern Mexican gartersnake is extant in some areas that have abundant nonnative aquatic predators, some of which also are prey for gartersnakes, so the presence of nonnative aquatic predators is not always indicative of absence of the gartersnake (Emmons and Nowak 2016a, p. 17; Emmons *et al.* 2016, entire; Nowak *et al.* 2016, pp. 6–8; Lashway 2015, p. 5). Although we acknowledge that we do not have a thorough understanding of northern Mexican gartersnake population dynamics in the presence of nonnative aquatic predators as compared to other areas (Burger 2016, pp. 13–15), areas with aquatic predators that are currently known to support gartersnake populations are included in critical habitat. However, we think it is reasonable to conclude based on the best scientific data currently available that streams, stream reaches, and lentic water bodies were not occupied at the time of listing if they have only northern Mexican gartersnake records older than 1998

and have experienced a rapid decline in native prey species coupled with an increase in nonnative aquatic predators since gartersnakes were detected in these areas in the 1980s.

Comment 50: Several commenters stated that designation of unoccupied critical habitat is needed for the northern Mexican gartersnake. Specifically, habitat fragmentation, small populations, and genetics threaten extinction and thus make unoccupied critical habitat essential. Designating unoccupied habitat is also important to restore connectivity among populations, and the Service should also consider reintroduction of the gartersnake to unoccupied areas.

Our Response: As discussed in the final listing rule (79 FR 38678; July 8, 2014), continued population decline and extirpations threaten the genetic representation of the northern Mexican gartersnake because some populations have become disconnected and isolated from neighboring populations. This can lead to a reduction in the species' redundancy and resiliency when isolated, small populations are at increased vulnerability to the effects of threats and stochastic events, without a means for natural recolonization.

As required by section 4(b) of the Act, we use the best scientific and commercial data available in determining areas within the geographical area occupied at the time of listing that contain the features essential to the conservation of a species and may require special management considerations or protection, and areas outside of the geographical area occupied at the time of listing that are essential for the conservation of the species. However, based on the best scientific data available we have not identified any unoccupied areas that are essential for the conservation of the species. While we know the conservation of the species will depend on increasing the number and distribution of populations of the northern Mexican gartersnake, not all of its historical range will be essential to the conservation of the species, and we are unable to delineate any specific unoccupied areas that are essential at this time. A number of areas within these watersheds continue to contain some or could develop many of the physical and

biological features upon which the species depends, although the best available scientific data indicate all these areas are currently unoccupied. Some areas in these watersheds with the potential to support the physical and biological features are likely important to the overall conservation strategy for the northern Mexican gartersnake. Any specific areas essential to the species' conservation within these watersheds are not currently identifiable due to our limited understanding regarding the ideal configuration for the development of future habitat to support the northern Mexican gartersnake's persistence, the ideal size, number, and configuration of these habitats. Although there may be a future need to expand the area occupied by the species to reach recovery, these areas have not been identified in recovery planning for the northern Mexican gartersnake. Therefore, we cannot identify unoccupied areas that are currently essential to the conservation of the species that should be designated as critical habitat.

Comment 51: One commenter stated that only including areas occupied by the species at the time of listing does not allow for naturally occurring range expansion into other areas with suitable habitat that already exist or are newly created from habitat restoration activities.

Our Response: Limiting critical habitat to areas occupied by a species at the time of listing does not prevent a species from naturally expanding into other areas. We designate those areas occupied at the time of listing that contain the PBFs and need special management considerations or protection, and any other unoccupied areas that are essential to conservation of the species. Based on the best scientific data available we have not identified any unoccupied areas that are essential for the conservation of the species. Please see our response to *Comment 50*, above.

Comment 52: One commenter stated that the northern Mexican gartersnake likely exists in the Verde River downstream of Beasley Flat from a sighting made by The

Nature Conservancy, and that area should have been included the revised proposed critical habitat rule (85 FR 23608; April 28, 2020).

Our Response: We could not confirm the sighting made by The Nature Conservancy, and are not aware of any other confirmed recorded sightings at the time of listing that document northern Mexican gartersnakes downstream of Beasley Flat, so this site is not included in this critical habitat designation because it does not meet our definition of an occupied reach for the species. We are aware of a 2019 confirmed record for northern Mexican gartersnake upstream of Beasley Flat, and this site is included in this critical habitat designation.

Comment 53: One commenter stated that we should add Scotia Canyon, Garden Canyon, and Huachuca Canyon in the Huachuca Mountains to critical habitat for the northern Mexican gartersnake based on a record of the species in the upper portion of Scotia Canyon near the Fort Huachuca boundary. The commenter stated that Garden and Huachuca Canyons have PBFs 1, 2, and 3; that Fort Huachuca's Environmental and Natural Resources Division reduces crayfish at an acceptable level for PBF 4; and that lack of detections in these areas is likely due to absence of targeted survey efforts.

Our Response: Scotia Canyon was included in the original proposed critical habitat rule (78 FR 41550; July 10, 2013) and the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), and is included in this final rule in the Upper Santa Cruz River Subbasin Unit of critical habitat for the northern Mexican gartersnake. We are not aware of any records that document northern Mexican gartersnakes in Garden Canyon or Huachuca Canyon, so these sites are not included in our critical habitat designation because they do not meet our definition of an occupied reach for the species. Please also see our response to *Comment 50*, above.

Comment 54: In response to the original proposed critical habitat rule (78 FR 41550; July 10, 2013), one commenter stated that we should consider including

unoccupied habitat for the northern Mexican gartersnake in the San Francisco River, Sycamore Canyon near Buenos Aires NWR, Davidson Canyon in the Cienega Creek watershed, and Leslie Canyon NWR.

Our Response: As explained above in our responses to *Comments 51* and *52*, we have not identified unoccupied areas that are essential to the conservation of the species and that should be designated as critical habitat. In addition, we are not aware of any historical records for the northern Mexican gartersnake in these areas.

Comment 55: Several commenters stated that our use of historical data spanning two decades to characterize areas of critical habitat that are “occupied at the time of listing” for purposes of a designation under section 3(5)(A)(i) of the Act is not synonymous with a determination that habitat is currently occupied for purposes of a “take” analysis under sections 7 and 10 of the Act, and that the distinction between these two concepts needs to be fully acknowledged and its implications explained in the final rule.

Our Response: We designate areas as critical habitat that are occupied at the time of listing if those areas have one or more of the PBFs present that are essential to the conservation of the species and may requires special management considerations or protection (81 FR 7413). In the 2020 revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we estimated that maximum longevity for northern Mexican gartersnake is 15 years, so it is reasonable to conclude that a gartersnake detected in 1998 or later represents a population that could still be present at the time of proposed listing in 2013, depending on the extent of threats in the area. We also included northern Mexican gartersnake detections after the species was listed because these areas were likely occupied at the time of listing in 2014. As a result, there are areas in this final designation of critical habitat with records of gartersnakes from 1998 through 2019.

Under section 7 of the Act, Federal agencies are required to consult with the Service to ensure that the actions they carry out, fund, or authorize are not likely to jeopardize the continued existence of the species, or destroy or adversely modify critical habitat. For a jeopardy or “take” analysis, we analyze effects to a species if the species is present in the action area during the time of the action. For an adverse modification analysis, we analyze effects to critical habitat if critical habitat for a species is present in the action area. Therefore, defining where a species is occupied at the time of listing for critical habitat designation is not synonymous with a determination that an area is currently occupied for purposes of a jeopardy analysis under section 7 of the Act or a “take” analysis under section 10 of the Act. Those determinations depend on the best available information at the time of the analysis, and the likely effects and likelihood of take depend on the action under consideration.

Comment 56: One commenter stated that livestock grazing would have a significant impact on habitat for the northern Mexican gartersnake and that special management considerations and protection would benefit the species.

Our Response: As discussed in the final listing rule (79 FR 38678; July 8, 2014), livestock grazing is a largely managed land use, and, where closely managed, it is not likely to pose significant threats to the northern Mexican gartersnake. In cases where poor livestock management results in fence lines in persistent disrepair, allowing unmanaged livestock access to occupied habitat, adverse effects from loss of vegetative cover, sedimentation, or alteration of prey base may result. Activities that significantly reduce cover or increase sedimentation are addressed below under *Application of the “Adverse Modification” Standard* and Special Management Considerations or Protection.

Comment 57: One commenter requested that we include a statement regarding the application of the “adverse modification” standard that existing activities are part of the baseline and, therefore, are presumed not to adversely modify critical habitat. The

commenter further stated that we should affirmatively state that “adverse modification” will not be found where the agency, working with the project proponent, demonstrates that it will offset impacts to critical habitat through the protection and maintenance of alternative habitat within the designation, which is of comparable quality to the habitat that would be lost.

Our Response: Section 7 of the Act requires us to ensure that any action authorized, funded, or carried out by the agency is not likely to destroy or adversely modify critical habitat. Therefore, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. This adverse modification standard does not change whether the activities are ongoing or new, and we do not have a mechanism to determine that existing activities are presumed to not destroy or adversely modify critical habitat. Any new activity under section 7 will require evaluation of the effects of the action based on the specifics of the location of the project and its effects.

Comment 58: Freeport-McMoRan Tyrone Inc. and Pacific Western Land Company (collectively known as “FMC”) stated that lands owned by FMC along the upper Gila River and Duck Creek in the Gila/Cliff Valley, Grant County, New Mexico, should be excluded from critical habitat pursuant to section 4(b)(2) of the Act based on their habitat management plans for spikedace (*Meda fulgida*) and loach minnow (*Rhinichthys cobitis*) and for southwestern willow flycatcher (*Empidonax traillii extimus*). FMC further stated that these management plans protect and support habitat for aquatic and riparian species, including native prey species for the northern Mexican gartersnake.

Our Response: In response to FMC’s request to exclude their lands along the upper Gila River and Duck Creek based on FMC habitat management plans for spikedace and loach minnow and for grazing management actions benefiting southwestern willow

flycatcher, we have determined that the exclusion would not be appropriate for several reasons. Although we commend FMC for investing time, effort, and funding for conservation on the Gila River, the habitat conservation efforts to date that have been implemented are focused on management actions for spinedace, loach minnow, and southwestern willow flycatcher along the Gila River. There are no conservation efforts specific to the northern Mexican gartersnake included in these plans, and Duck Creek is not part of their planning area. In identifying critical habitat for the northern Mexican gartersnake, we identified those areas that meet the definition of critical habitat under section 3(5)(A) of the Act. Although management actions for one listed species may overlap other species' habitat or be mutually beneficial to multiple listed species, the physical and biological features in occupied habitat for the northern Mexican gartersnake differ from the physical and biological features identified for spinedace, loach minnow, and southwestern willow flycatcher. As a result, excluding these areas based on management for listed fish and bird species does not meet our criteria for exclusion. See **Exclusions, Private or Other Non-Federal Conservation Plans or Agreements and Partnerships, in General**, below.

Comment 59: Permittees of the Service-approved section 10 Salt River Project (SRP) Roosevelt Habitat Conservation Plan (HCP) requested that areas below the Modified Roosevelt Dam conservation space, or full pool elevation of 2,151 ft (656 m) (Roosevelt Lake Conservation Storage space), be removed or excluded from critical habitat for the northern Mexican gartersnake. Effects to northern Mexican gartersnakes within the Roosevelt Lake Conservation Storage space will be addressed in an upcoming modification to the SRP Roosevelt HCP that should be completed by December 2021, and this area does not contain PBFs 2 and 4 most of the time because of inundation that is entirely different from the natural periodic flooding that one would observe in a stream exhibiting a natural flow regime. The commenters further stated that any habitat that

forms during interim periods is temporary and does not qualify as habitat essential to the conservation of the species.

The commenters also requested that the Roosevelt Lake flood control space (2,151 to 2,175 ft (656 to 663 m) elevation), which is under the jurisdiction of the U.S. Army Corps of Engineers (Corps), be excluded from critical habitat for the northern Mexican gartersnake. The commenters stated that this area will continue to be subject to minimization requirements under section 7 and impacts to the northern Mexican gartersnake would likely be quantified in terms of habitat loss. Therefore, designation of the area as critical habitat provides little, if any, additional benefit for species conservation.

Our Response: As a result of discussions with SRP since the publication of the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), in this final rule, we revised the extent of the critical habitat within the Tonto Creek Unit to its full pool elevation of 2,151 ft (656 m) to avoid those areas typically inundated by the lake in the Roosevelt Lake Conservation Storage space. Although the northern Mexican gartersnake may use these areas during periods of drought or at other times when the lake is drawn down, these areas are temporary and extremely variable, and may not contain the PBFs necessary for survival on a long-term basis.

With respect to flood control activities in the Roosevelt Lake flood control space included in critical habitat, Federal agencies that authorize, carry out, or fund actions that may affect listed species or designated critical habitat are required to consult with us to ensure the action is not likely to jeopardize listed species or destroy or adversely modify designated critical habitat. This consultation requirement under section 7 of the Act is not a prohibition of Federal agency actions; it is a means by which they may proceed in a manner that avoids jeopardy or adverse modification. Even in areas absent designated critical habitat, if the Federal agency action may affect a listed species, consultation is

still required to ensure the action is not likely to jeopardize the species. Because the areas designated as critical habitat are occupied and consultation will be required to meet the jeopardy standard, the impact of the critical habitat designation should be minimal and administrative in nature. In addition, existing consultation processes also allow for emergency actions for risks to human life and property; critical habitat would not prevent the Corps from fulfilling those obligations.

In regards to the commenters' request to exclude the Roosevelt Lake flood control space from the critical habitat designation for the northern Mexican gartersnake, the commenters provided general statements of their desire to be excluded but no information or reasoned rationale as described in the preamble discussion of our Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016) or as described in our revised proposed critical habitat rule (85 FR 23608; April 28, 2020). To properly evaluate an exclusion request, the commenters must provide information concerning how the Corps flood control activities would be limited or curtailed by the designation, and hence the need for exclusion. In addition, as noted above, the requirement to consult with us on Federal actions that may affect designated critical habitat is designed to allow actions to proceed while avoiding destruction or adverse modification of critical habitat.

In the Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016), we outline the procedures we undertake when determining if an area should or should not be excluded. In determining whether to exclude an area, we are given a great deal of discretion for undertaking an exclusion analysis or determining to exclude an area. In our review of SRP's request for exclusion, we determined that the effect of having critical habitat designated in the Roosevelt Lake flood control space would require consultation with us for those Federal agency actions that may affect such designated critical habitat. In addition, we determined that this

consultation requirement would not preclude these flood control activities from occurring, and subsequently would not result in a potential for increased risk of injury to human life and property.

Comment 60: Permittees of the Service-approved Roosevelt HCP requested that the critical habitat within the SRP Camp Verde Riparian Preserve (Preserve) be designated as critical habitat for the northern Mexican gartersnake.

The commenters expressed that a designation of critical habitat on the Preserve would assist the public's understanding of the importance of year-round protection for the riparian habitat that supports the northern Mexican gartersnake population, as well as flycatchers and cuckoos that are present on the property.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we identified approximately 96 ac (39 ha) within the Verde River Subunit of the Verde River Subbasin Unit owned by SRP covered by the Roosevelt HCP for the northern Mexican gartersnake. We are not excluding this area from the final designation. See **Exclusions**, *Private or Other Non-Federal Conservation Plans Related to Permits Under Section 10 of the Act*, below.

Comment 61: One commenter stated that adequate surveys have not been conducted on properties managed by The Nature Conservancy along the Verde River, and there is no management plan to protect the species on these properties, so the properties should not be excluded from the critical habitat designation.

Our Response: We did not receive a request for exclusion for The Nature Conservancy properties along the Verde River, although in the original proposed critical habitat rule (78 FR 41550; July 10, 2013) and in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020) we stated that we would consider The Nature Conservancy's Verde Springs Preserve and Verde Valley property for exclusion. The Nature Conservancy did not provide any supporting information, as described in our

Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016), or in response to our request for information in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020). Although The Nature Conservancy is working with us to address conservation and recovery of the species in other areas, we have determined that the exclusion is not appropriate because we are not aware of any management plan for these properties along the Verde River that addresses conservation of the northern Mexican gartersnake. See **Exclusions**, *Private or Other Non-Federal Conservation Plans or Agreements and Partnerships, in General*, below.

Comment 62: One commenter stated that we should not exclude Page Springs and Bubbling Ponds State Fish Hatcheries along Oak Creek in Yavapai County, Arizona, from the critical habitat designation because road mortality is high on the hatchery properties, and construction on the hatcheries will adversely modify habitat for the northern Mexican gartersnake. Another commenter stated that although AGFD has conservation projects and management actions for the species at these sites, it has not been consistent. They also stated construction at Bubbling Ponds Fish Hatchery impacts the species.

Our Response: We identified this area for possible exclusion in the original proposed critical habitat rule (78 FR 41550; July 10, 2013) and in the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), and we have excluded it in this final rule based on AGFD's comprehensive management plan for its Page Springs Aquatic Resources Complex. Based on our consideration of proposed exclusions, we found that AGFD has demonstrated a commitment to management practices that have conserved and benefited the northern Mexican gartersnake population in the area and is currently managing northern Mexican gartersnake habitat successfully. Additionally, the exclusion of these areas is likely to be beneficial in maintaining working partnerships with AGFD and private landowners. As a result of our exclusion/inclusion benefits analysis, we have

determined that it is appropriate to exclude the area from the designation. Our rationale for excluding Page Springs and Bubbling Ponds State Fish Hatcheries is outlined below under **Exclusions, Private or Other Non-Federal Conservation Plans or Agreements and Partnerships, in General.**

Comment 63: Permittees of the Service-approved section 10 Pima County Multi-Species Conservation Plan (MSCP) requested that the critical habitat within the Cienega Creek Natural Area managed by Pima County Regional Flood Control District that falls within the Pima County MSCP planning area be designated as critical habitat.

The commenters expressed their confidence in the ability to deliver conservation benefit to the northern Mexican gartersnake by way of the mitigation, management, and monitoring strategies in the MSCP. However, large-scale Federal actions outside of Pima County's control could have significant negative impacts on species and lands under their management. The designation of critical habitat would require Federal agencies to use an additional standard of review when conducting section 7 consultations with the Service for federally permitted activities not controlled by Pima County. Keeping the area as critical habitat would further serve to benefit the conservation of species and its habitat (Murray 2020, entire). The commenters stated that maintaining northern Mexican gartersnake critical habitat on lands managed by the Pima County Regional Flood Control District would not impact their section 10(a)(1)(B) permit or their partners. The commenters therefore requested that critical habitat for the northern Mexican gartersnake be maintained on District-owned and leased properties and on the Federal lands within Las Cienegas NCA.

Our Response: In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we identified approximately 12 mi (19 km) of Cienega Creek within 543 ac (220 ha) of the Cienega Creek Subunit of the Cienega Creek Subbasin Unit owned by Pima County Regional Flood Control District covered by the Pima County MSCP for the

northern Mexican gartersnake. We are not excluding this area from this final critical habitat designation. See **Exclusions**, *Private or Other Non-Federal Conservation Plans Related to Permits Under Section 10 of the Act*, below. We did not consider Federal lands within the Las Cienegas NCA for exclusion from critical habitat.

Comment 64: We received several comments regarding exclusion from critical habitat designation of areas in the Upper San Pedro River Subbasin Unit that fall within the San Pedro Riparian NCA. One commenter requested that lands managed by the BLM, Arizona State Land Department, and private entities within the San Pedro River Subunit and Babocomari River Subunit, totaling approximately 5,745 ac, be excluded under section 4(b)(2) of the Act due to national security. The commenter stated that the proposed designation of critical habitat within these areas does not create a benefit to the northern Mexican gartersnake, yet it creates a significant economic burden that impairs the ability of the Department of Defense to protect national security. Several other commenters stated that the San Pedro River watershed area should not be excluded because the Army's request that lands controlled by other jurisdictions (i.e., BLM, State of Arizona, private landowners) would increase its regulatory burden and negatively impact national security operations is too speculative and simplistic. One commenter stated that we should not exclude from critical habitat designation the San Pedro River Subunit and the Babocomari River Subunit based on national security impacts because the military base is not actually located within the proposed critical habitat, and groundwater pumping threatens the San Pedro River community, which included a vast majority of the proposed critical habitat for the northern Mexican gartersnake.

Our Response: For exclusion of an area from critical habitat designation based on national security, we look to our Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (81 FR 7226; February 11, 2016), which outlines measures we consider when excluding areas from critical habitat. A Federal agency must request

exclusion based on National Security concerns and Fort Huachuca requested this exclusion. We reviewed Fort Huachuca's request for exclusion and determined that we are not considering the subject areas for exclusion from this final critical habitat designation due to national security. Please see **Exclusions** (*Exclusions Based on Impacts on National Security and Homeland Security*) for our analysis of the Fort Huachuca request for exclusion of lands within the San Pedro River and Babocomari River Subunits, which are within the San Pedro River NCA.

Comment 65: Several commenters stated that we should consider the full scope of economic impacts to small entities for critical habitat rules. They also stated that the economic impact of the proposed designation would be significant on agricultural and ranching operations.

Our Response: For the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we made available, and requested public comments on, a draft economic analysis to examine the incremental costs associated with the designation of critical habitat. Our draft economic analysis did not find that there would be significant economic impacts to agriculture from this designation of critical habitat. This includes impacts to third-party entities, such as local governments and private landowners. Critical habitat does not restrict private landowner access to their property, and private landowners would only need to consult with the Service under section 7 of the Act if Federal agency funding or permitting for an activity is needed. Because the areas are considered occupied, most costs are not associated with the critical habitat designation, but rather with listing of the species as threatened. In our mapping of critical habitat, we focused on areas that contain the PBFs for the species. We do not anticipate requesting additional modifications for livestock grazing or agricultural operations, or cost-share projects undertaken with agencies such as the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), as a result of the critical habitat designation

beyond those required for the species itself. The economic analysis outlines the substantial baseline protections currently afforded the northern Mexican gartersnake through its listed status under the Act and the presence of the species in all designated critical habitat units, as well as overlap with the designated critical habitat of other, similar listed species. As a result of these protections, the economic analysis concludes that incremental impacts associated with section 7 consultations for the gartersnake are likely limited to additional administrative effort. Many of the areas designated as critical habitat for the gartersnake are already designated critical habitat for other listed species, and thus would not cause an incremental increase in effects due to the designation of critical habitat for the northern Mexican gartersnake.

However, we recognize the potential for landowners' perceptions of the Act to influence land use decisions, including decisions to participate in Federal programs such as those managed by NRCS. Several factors can influence the magnitude of perception-related effects, including the community's experience with the Act and understanding of the degree to which future section 7 consultations could delay or affect land use activities. Information is not available to predict the impact of the designation of critical habitat on landowners' decisions to pursue cost-share projects with NRCS in the future. However, incremental effects due to the designation of critical habitat for the northern Mexican gartersnake are likely to be minimized because the species is already listed.

Comment 66: One commenter requested we update the economic analysis to account for the impact of COVID-19 on economic conditions.

Our Response: We do not anticipate any additional effects on economic conditions as a result of the impact of the COVID-19 pandemic. For the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we made available, and requested public comments on, a draft economic analysis to examine the incremental costs associated with the designation of critical habitat. The draft economic analysis did not

identify significant impacts. Because the critical habitat areas are considered occupied, the majority of costs are not associated with the critical habitat designation, but rather with listing of the species as threatened. If Federal funding is involved, the Federal agency providing the funding is the party responsible for meeting the Act's obligations to consult on projects on private lands. We have considered and applied the best available scientific and commercial information in determining the economic impacts associated with designating critical habitat. Critical habitat designation may also generate ancillary benefits by protecting the PBFs on which the species depends. As a result, management actions undertaken to conserve the species or its habitat may have coincident, positive social welfare implications, such as increased recreational opportunities in a region or improved property values on nearby parcels.

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (i.e., range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (e.g.,

migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Designation also does not allow the government or public to access private lands, nor does designation require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must implement “reasonable and prudent alternatives” to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical or biological features that occur in specific occupied areas, we focus on the specific features that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. When designating critical habitat, the Secretary will first evaluate areas occupied by the species. The Secretary will only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied by the species would be inadequate to ensure the conservation of the species. In addition, for an unoccupied area to be considered essential, the Secretary must determine that there is a reasonable certainty both that the area will contribute to the conservation of the species

and that the area contains one or more of those physical or biological features essential to the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the *Federal Register* on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information from the species status assessment (SSA) report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; the recovery plan for the species; articles in peer-reviewed journals; conservation plans developed by States and counties; scientific status surveys and studies; biological assessments; other unpublished materials; or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and

outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act; (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species; and (3) the prohibitions found in section 9 of the Act. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Physical or Biological Features Essential to the Conservation of the Species

In accordance with section 3(5)(A)(i) of the Act and the applicable regulations at 50 CFR 424.12(b) (2012), in determining which areas we will designate as critical habitat from within the geographical area occupied by the species at the time of listing, we consider the physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. The regulations at 50 CFR 424.02 define “physical or biological features essential to the conservation of the species” as the features that occur in specific areas and that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size,

distribution distances, and connectivity. For example, physical features essential to the conservation of the species might include gravel of a particular size required for spawning, alkaline soil for seed germination, protective cover for migration, or susceptibility to flooding or fire that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or a particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic essential to support the life history of the species.

In considering whether features are essential to the conservation of the species, the Service may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance.

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential to the conservation of the northern Mexican gartersnake from studies of the species' habitat, ecology, and life history as described below. We have determined that the following physical or biological features are essential to the conservation of the northern Mexican gartersnake:

1. Perennial or spatially intermittent streams that provide both aquatic and terrestrial habitat that allows for immigration, emigration, and maintenance of population connectivity of northern Mexican gartersnakes and contain:

(A) Slow-moving water (walking speed) with in-stream pools, off-channel pools, and backwater habitat;

(B) Organic and natural inorganic structural features (e.g., boulders, dense aquatic and wetland vegetation, leaf litter, logs, and debris jams) within the stream channel for thermoregulation, shelter, foraging opportunities, and protection from predators;

(C) Terrestrial habitat adjacent to the stream channel that includes riparian vegetation, small mammal burrows, boulder fields, rock crevices, and downed woody debris for thermoregulation, shelter, foraging opportunities, brumation, and protection from predators; and

(D) Water quality that meets or exceeds applicable State surface water quality standards.

2. Hydrologic processes that maintain aquatic and terrestrial habitat through:

(A) A natural flow regime that allows for periodic flooding, or if flows are modified or regulated, a flow regime that allows for the movement of water, sediment, nutrients, and debris through the stream network; and

(B) Physical hydrologic and geomorphic connection between a stream channel and its adjacent riparian areas.

3. A combination of amphibians, fishes, small mammals, lizards, and invertebrate prey species such that prey availability occurs across seasons and years.

4. An absence of nonnative fish species of the families Centrarchidae and Ictaluridae, American bullfrogs (*Lithobates catesbeianus*), and/or crayfish (*Orconectes virilis*, *Procambarus clarki*, etc.), or occurrence of these nonnative species at low enough levels such that recruitment of northern Mexican gartersnakes is not inhibited and maintenance of viable prey populations is still occurring.

5. Elevations from 130 to 8,497 feet (40 to 2,590 meters).

6. Lentic wetlands including off-channel springs, cienegas, and natural and constructed ponds (small earthen impoundment) with:

(A) Organic and natural inorganic structural features (e.g., boulders, dense aquatic and wetland vegetation, leaf litter, logs, and debris jams) within the ordinary high water mark for thermoregulation, shelter, foraging opportunities, brumation, and protection from predators;

(B) Riparian habitat adjacent to ordinary high water mark that includes riparian vegetation, small mammal burrows, boulder fields, rock crevices, and downed woody debris for thermoregulation, shelter, foraging opportunities, and protection from predators; and

(C) Water quality that meets or exceeds applicable State surface water quality standards.

7. Ephemeral channels that connect perennial or spatially intermittent perennial streams to lentic wetlands in southern Arizona where water resources are limited.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection.

A detailed discussion of activities influencing the northern Mexican gartersnake and its habitat can be found in the final listing rule (79 FR 38678; July 8, 2014). All areas of critical habitat will require some level of management to address the current and future threats to the northern Mexican gartersnake and to maintain or restore the PBFs. Special management within critical habitat will be needed to ensure these areas provide adequate water quantity, quality, and permanence or near permanence; cover (particularly in the presence of nonnative aquatic predators); an adequate prey base; and absence of or low

numbers of nonnative aquatic predators that can affect population persistence. Activities that may be considered adverse to the conservation benefits of critical habitat include those which: (1) Completely dewater or reduce the amount of water to unsuitable levels in critical habitat; (2) result in a significant reduction of protective cover within critical habitat when nonnative aquatic predators species are present; (3) remove or significantly alter structural terrestrial features of critical habitat that alter natural behaviors such as thermoregulation, brumation, gestation, and foraging; (4) appreciably diminish the prey base for a period of time determined to likely cause population-level effects; and (5) directly promote increases in nonnative aquatic predator populations, result in the introduction of nonnative aquatic predators, or result in the continued persistence of nonnative aquatic predators. Common examples of these activities may include, but are not limited to, various types of development, channelization, diversions, road construction, erosion control, bank stabilization, wastewater discharge, enhancement or expansion of human recreation opportunities, fish community renovations, and stocking of nonnative, spiny-rayed fish species or promotion of policies that directly or indirectly introduce nonnative aquatic predators as bait. The activities listed above are just a subset of examples that have the potential to affect critical habitat and PBFs if they are conducted within designated units; however, some of these activities, when conducted appropriately, may be compatible with maintenance of adequate PBFs or even improve upon their value over time.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our applicable implementing regulations 50 CFR 424.12(b) (2012), to make a critical habitat designation, we review available information pertaining to the habitat requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing

and any specific areas outside the geographical area occupied by the species that are determined to be essential to the conservation of the species. We are not designating any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat. We are not designating any areas as critical habitat outside the geographical area occupied by the species at the time of listing. Sites within the Upper Gila River, Upper Salt River, Verde River, Agua Fria River, San Pedro River, Santa Cruz River, and Black Draw watersheds were previously occupied by the northern Mexican gartersnake. While we know the conservation of the species will depend on increasing the number and distribution of populations of the northern Mexican gartersnake, not all of its historical range will be essential to the conservation of the species, and we are unable to delineate any specific unoccupied areas that are essential at this time. A number of areas within these watersheds continue to contain some or could develop many of the physical and biological features upon which the species depends, although the best available scientific data indicate all these areas are currently unoccupied. Some areas in these watersheds with the potential to support the physical and biological features are likely important to the overall conservation strategy for the northern Mexican gartersnake. Any specific areas essential to the species' conservation within these watersheds are not currently identifiable due to our limited understanding regarding the ideal configuration for the development of future habitat to support the northern Mexican gartersnake's persistence, the ideal size, number, and configuration of these habitats. Finally, the specific areas needed for conservation will depend in part on landowner willingness to restore and maintain the species' habitat in these areas. Therefore, although there may be a future need to expand the area occupied by the northern Mexican gartersnake to reach recovery, there are no unoccupied areas that are currently essential to the species' conservation and that should be designated as critical habitat.

To identify critical habitat units for the northern Mexican gartersnake, we used a variety of sources for species data, including riparian species survey reports, museum records, heritage data from State wildlife agencies, peer-reviewed literature, agency reports, and incidental sight records accompanied by photo vouchers and other supporting documentation verified by interviews with species experts. Holycross *et al.* (2020, entire) was a key source of information for vouchered historical and current records of the northern Mexican gartersnake species across its range. Other sources for current records of the northern Mexican gartersnake included Cotten *et al.* (2014, entire), Holycross *et al.* (2006, entire), and Rosen *et al.* (2001, entire). In addition to reviewing gartersnake-specific survey reports, we also focused on survey reports and heritage data from State wildlife agencies for fish and amphibians, as they captured important data on the existing community ecology that affects the status of the northern Mexican gartersnake within its range. In addition to species data sources, we used publicly available geospatial datasets depicting water bodies, stream flow, vegetation type, and elevation to identify areas for critical habitat designation.

We determined that a stream, stream reach, or lentic water body was occupied at the time of listing for northern Mexican gartersnake if it is within the historical range of the species, contains all PBFs for the species, (although the PBFs concerning prey availability and presence of nonnative predators are often in degraded condition), and a last known record of occupancy in 1998 or later. We determined occupancy at the time of listing for northern Mexican gartersnake by reviewing all records for the species in conjunction with expected survivorship of each species, subsequent surveys in areas that had no detection of the corresponding gartersnake species, and changes in threats over time that may have prevented occupancy at time of listing. Understanding longevity of a species can inform how long we can reasonably expect a species is still extant in an area, regardless of detection probability. The oldest estimated northern Mexican gartersnake is

between 14 and 16 years old, although growth rate calculations are still preliminary (Ryan 2020, pers. comm.). The longest years between recaptures from these mark-recapture studies is 9 years (Ryan 2020, pers. comm.). Based on this information, we estimate maximum longevity for each gartersnake species is 15 years, so that it is reasonable to conclude that a gartersnake detected in 1998 or later represents a population that could still be present at the time of proposed listing in 2013, depending on the extent of threats in the area. Although it is possible that gartersnakes are still extant in areas where they were detected prior to 1998, we have determined that the best available information reflecting occupancy at the time of listing supports a more recent date of records since 1998.

Based on our analyses in the rule listing northern Mexican gartersnakes (79 FR 38678; July 8, 2014), we conclude that there has been a significant decline in the species over the past 50 years. This decline appeared to accelerate during the two decades immediately before listing occurred. From this observation, we conclude that many areas that were occupied by the species in surveys during the 1980s are likely no longer occupied because those populations have disappeared. To determine where loss of populations was likely, we reviewed survey efforts after 1989 that did not detect gartersnakes to determine whether the cryptic nature of the species was a valid argument for considering areas that only have gartersnake records from the 1980s as still occupied at the time of listing in 2013. All of the surveys conducted since the 1980s included at least the same amount or more search effort than those surveys that detected each species in the 1980s. Since 1998, researchers have detected northern Mexican gartersnakes in many areas where they were found in the 1980s. Areas where the species was found after 1997 are included in this final rule. Additionally, comparable surveys did detect gartersnakes in other areas where the species was present in the 1980s. Finally, we would expect that some populations would be lost during the decades preceding listing when

numbers of gartersnakes were declining. These declines are what eventually led to the need to list the northern Mexican gartersnake.

As explained extensively in the final listing rule for northern Mexican gartersnake species (79 FR 38678, July 8, 2014, pp. 79 FR 38688–79 FR 38702), aquatic vertebrate survey efforts throughout the range of the northern Mexican gartersnake indicate that native prey species of northern Mexican gartersnakes have decreased or are absent, while nonnative predators, including bullfrogs, crayfish, and spiny-rayed fish, continue to increase in many of the areas where northern Mexican gartersnakes were present in the 1980s (Emmons and Nowak 2012, pp. 11–14; Gibson *et al.* 2015, pp. 360–364; Burger 2016, pp. 21–32; Emmons and Nowak 2016a, pp. 43–44; Hall 2017, pp. 12–13). We acknowledge that northern Mexican gartersnakes are extant in some areas that have abundant nonnative, aquatic predators, some of which also are prey for gartersnakes, so presence of nonnative aquatic predators is not always indicative of absence of these gartersnakes (Emmons and Nowak 2012, p. 31; Emmons and Nowak 2016a, p. 13; Emmons *et al.* 2016, entire; Nowak *et al.* 2016, pp. 5–6; Lashway 2015, p. 5). We also acknowledge that we do not have a good understanding of why gartersnake populations are able to survive in some areas with aquatic predators and not in other areas (Burger 2016, pp. 13–15). However, we think it is reasonable to conclude that streams, stream reaches, and lentic water bodies were not occupied at the time of listing if they have only gartersnake records older than 1998 and have experienced a rapid decline in native prey species coupled with an increase in nonnative aquatic predators since gartersnakes were detected in these areas in the 1980s.

We included detections of northern Mexican gartersnake that occurred after the species was listed because these areas were likely occupied at the time of listing in 2014. As stated earlier, the species is cryptic in nature and may not be detected without intensive surveys. Because populations for these species are generally small, isolated, and

in decline it is not likely that the species have colonized new areas since 2014; these areas were most likely occupied at the time of listing, but either had not been surveyed or the species were present but not detected during surveys. However, we did not include streams or lentic water bodies where northern Mexican gartersnakes were released for recovery purposes after the species was listed that had not been historically occupied by the species.

Stream reaches that lack PBFs include areas where water flow became completely ephemeral along an otherwise perennial or spatially intermittent stream, hydrologic processes needed to maintain streams could not be recovered, nonnative aquatic predators outnumbered native prey species, or streams were outside the elevation range. In addition, reaches with multiple negative surveys without a subsequent positive survey or reaches that have no records of northern Mexican gartersnake species are not included. We do include stream reaches that lack survey data for the species, if they have positive observation records of the species dated 1998 or later both upstream and downstream of the stream reach and have all of the PBFs.

We also reviewed the best available information we have on home range size and potential dispersal distance for northern Mexican gartersnake species to inform upstream and downstream boundaries of each unit and subunit of critical habitat. The maximum longitudinal distance measured across home range areas of northern Mexican gartersnake tracked for at least one year was 4,852 ft (1,478.89 m) for one individual, and ranged from 587.9 to 2,580 ft (179.2 to 481.58 m) for eight other northern Mexican gartersnakes (Nowak et al. 2019, pp. 24–25). These longitudinal home range distances were all determined from adult gartersnakes and did not inform how juvenile gartersnakes are dispersing along a stream. Juvenile dispersal is important because snakes of different age classes behave differently, and juvenile gartersnakes may move farther along a stream as they search for and establish suitable home ranges than do adults with established home

ranges. Because we have no information on how juvenile northern Mexican gartersnakes disperse, we used information from a long-term dispersal study on neonate, juvenile, and adult age classes of the Oregon gartersnake (*Thamnophis atratus hydrophilus*) in a free-flowing stream environment in northern California (Welsh *et al.* 2010, entire). This is the only dispersal study available for another aquatic *Thamnophis* species in the United States, so we used it as a surrogate for determining upstream and downstream movements of northern Mexican gartersnakes. The greatest movement was made by a juvenile recaptured as an adult 2.2 mi (3.6 km) upstream from the initial capture location (Welsh *et al.* 2010, p. 79). Therefore, in this final rule, we delineate upstream and downstream critical habitat boundaries of a stream reach at 2.2 mi (3.6 km) from a known northern Mexican gartersnake observation record.

The maps define the critical habitat designation, as modified by any accompanying regulatory text, presented at the end of this document under **Regulation Promulgation**. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document.

In summary, for areas within the geographic area occupied by the species at the time of listing, we delineated critical habitat unit boundaries using the following criteria:

1. We mapped records of observations of northern Mexican gartersnakes from 1998 to 2019. We then examined these areas to determine if northern Mexican gartersnakes could still occur in them, as described below.
2. We identified streams in which northern Mexican gartersnakes were found since 1980 (used flowline layer in the U.S. Geological Survey (USGS) National Hydrography Dataset to represent stream centerlines).
3. We identified and removed upstream and downstream ends of streams that were below 130 ft or above 8,500 ft elevation using USGS National Elevation Dataset.
4. We identified perennial, intermittent, and ephemeral reaches of streams. We

removed end reaches of streams that are ephemeral based on FCode attribute of the flowline layer in the USGS National Hydrography Dataset or information from peer review and public comments.

5. We identified prey species along each stream using geospatial datasets, literature, peer review, and public comments. We removed stream reaches that were documented to not contain prey species.

6. We identified and removed stream reaches with an abundance of nonnative aquatic predators including fish, crayfish, or bullfrogs. (We used a combination of factors to determine nonnative presence and impact to the species. This evaluation included records from 1980 by looking at subsequent negative survey data for northern Mexican gartersnakes along with how the nonnative aquatic predator community had changed since those gartersnakes were found, in addition to the habitat condition and complexity. Most of the areas surveyed in the 1980s that had been re-surveyed with negative results for northern Mexican gartersnakes had significant changes to the nonnative aquatic predator community, which also decreased prey availability for the gartersnakes. These areas were removed in our revised proposed critical habitat rule (85 FR 23608; April 28, 2020).

7. We identified and removed stream reaches where stocking or management of nonnative fish species of the families Centrarchidae and Ictaluridae is a priority and is conducted on a regular basis.

8. We identified and included those stream reaches on private land without public access that lack survey data but that have positive survey records from 1998 forward both upstream and downstream of the private land and have stream reaches with PBFs 1 and 2.

9. We used a surrogate species to determine potential neonate dispersal along a stream, which is 2.2 mi (3.6 km). We then identified the most upstream and downstream

records of the northern Mexican gartersnake along each continuous stream reach determined by criteria 1 through 8, above, and extended the stream reach to include this dispersal distance.

10. After identifying the stream reaches that met the above parameters, we then connected those reaches between that have the PBFs. We consider these areas between survey records occupied because the species occurs upstream and downstream and multiple PBFs are present that allow the species to move through these stream reaches.

11. We identified the springs, cienegas, and natural or constructed ponds in which records of observations of the species from 1998 to 2019 were found and included them in the critical habitat designation.

12. We identified ephemeral reaches of occupied perennial or intermittent streams that serve as corridors between springs, cienegas, and natural or constructed ponds.

13. We identified and included the wetland and riparian area adjacent to streams, springs, cienegas, and ponds to capture the wetland and riparian habitat needed by the species for thermoregulation, foraging, and protection from predators. We used the wetland and riparian layers of the Service's National Wetlands Inventory dataset and aerial photography in Google Earth Pro to identify these areas.

When determining critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the northern Mexican gartersnake. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands will not trigger section 7 consultation with respect to critical habitat and the requirement

of no adverse modification unless the specific action would affect the PBFs in the adjacent critical habitat. However, constructed fish barriers in streams within the designated critical habitat are part of the designation and are needed to manage the exclusion of nonnative species. Accordingly, section 7 consultation would apply to actions involving such fish barriers.

We are designating as critical habitat lands that we have determined are occupied at the time of listing (i.e., currently occupied) and that contain one or more of the physical or biological features that are essential to support life-history processes of the species. As described above, we are not designating any areas outside the geographical area occupied by the species at the time of listing.

Units are designated based on one or more of the physical or biological features being present to support the northern Mexican gartersnake's life-history processes. Some units contain all of the identified PBFs and support multiple life-history processes. Some units contain only some of the PBFs necessary to support the northern Mexican gartersnake's use of that habitat.

The critical habitat designation is defined by the maps, as modified by any accompanying regulatory text, presented at the end of this document under **Regulation Promulgation**. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on <http://www.regulations.gov> at Docket No. FWS-R2-ES-2020-0011, on our Internet site <https://www.fws.gov/southwest/es/Arizona/>, and upon request from the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT**).

Final Critical Habitat Designation

We are designating eight units as critical habitat for the northern Mexican gartersnake. The critical habitat areas we describe below constitute our current best

assessment of areas that meet the definition of critical habitat for the northern Mexican gartersnake.

The eight areas we designate as critical habitat for the northern Mexican gartersnake are: (1) Upper Gila River Subbasin; (2) Tonto Creek; (3) Verde River Subbasin; (4) Bill Williams River Subbasin; (5) Arivaca Cienega; (6) Cienega Creek Subbasin; (7) Upper Santa Cruz River Subbasin; and (8) Upper San Pedro River Subbasin. Table 1 shows the critical habitat units and the approximate area of each unit.

TABLE 1. Critical habitat units for northern Mexican gartersnake.

[Area estimates reflect all land within critical habitat unit boundaries.]

Unit	Subunit	Land Ownership by Type Acres (Hectares)				Total Size Acres (Hectares)
		Federal	State	Tribal	Private	
1. Upper Gila River Subbasin	Gila River		22 (9)		1,006 (407)	1,028 (416)
	Duck Creek				104 (42)	104 (42)
Unit Total			22 (9)		1,110 (449)	1,133 (458)
2. Tonto Creek		2,230 (902)			947 (383)	3,176 (1,285)
Unit Total		2,230 (902)			947 (383)	3,176 (1,285)
3. Verde River Subbasin	Verde River	768 (311)	570 (231)		2,955 (1,126)	4,292 (1,737)
	Oak Creek	193 (78)			680 (275)	873 (353)
	Spring Creek	17 (7)	1 (<1)		80 (32)	99 (40)
Unit Total		978 (396)	571 (231)		3,715 (1,433)	5,265 (2,131)
4. Bill Williams River Subbasin	Big Sandy River	339 (137)			593 (240)	932 (377)
	Santa Maria River	780 (316)			532 (215)	1,312 (531)
Unit Total		1,119 (453)			1,126 (456)	2,245 (908)
5. Arivaca Cienega		149 (60)	1 (<1)		62 (25)	211 (86)
Unit Total		149 (60)	1 (<1)		62 (25)	211 (86)
6. Cienega Creek Subbasin	Cienega Creek	755 (306)	308 (125)		605 (245)	1,668 (675)
	Empire Gulch and Empire	268 (109)	57 (23)			326 (132)

	Wildlife Pond					
	Gardner Canyon and Maternity Wildlife Pond	74 (30)				74 (30)
	Unnamed Drainage and Gaucho Tank	15 (6)				15 (6)
Unit Total		1,113 (450)	366 (148)		605 (245)	2,083 (843)
7. Upper Santa Cruz River Subbasin	Sonoita Creek				224 (91)	224 (91)
	Cott Tank Drainage	13 (5)				13 (5)
	Santa Cruz River		70 (28)			70 (28)
	Unnamed Drainage to Pasture 9 Tank		36 (15)			36 (15)
	Unnamed Drainage to Sheehy Spring		5 (2)			5 (2)
	Scotia Canyon	31 (13)				31 (13)
	FS799 Tank	0.7 (0.3)				0.7 (0.3)
Unit Total		45 (18)	111 (45)		224 (91)	380 (154)
8. Upper San Pedro River Subbasin	San Pedro River	4,911 (1,988)			215 (87)	5,126 (2,074)
	Babocomari River	197 (80)	8 (3)		199 (81)	404 (164)
	O'Donnell Canyon	58 (24)			181 (73)	239 (97)
	Post Canyon	30 (12)			32 (13)	62 (19)
	Unnamed Drainage and Finley Tank				3 (1)	3 (1)
	House Pond	0.6 (0.2)				0.6 (0.2)
Unit Total		5,197 (2,103)	8 (3)		630 (255)	5,834 (2,361)
Grand Total		10,831 (4,383)	1,078 (436)		8,419 (3,407)	20,326 (8,226)

Note: Area sizes may not sum due to rounding.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the northern Mexican gartersnake, below.

Unit 1: Upper Gila River Subbasin Unit

Unit 1 consists of 1,133 ac (458 ha) along 13 stream mi (21 km) in two subunits, with 9 stream mi (14 km) along the Gila River and 4 stream mi (6 km) along Duck Creek. The Upper Gila River Subbasin Unit is located in southwestern New Mexico southeast of the towns of Cliff and Gila, in Grant County. The New Mexico Department of Game and Fish, New Mexico State Land Department, and private entities manage lands within this unit.

Unit 1 is designated as critical habitat because it was occupied at the time of listing and as a whole, this unit contains PBFs 1, 2, and 5, but PBFs 3 and 4 are in degraded condition. PBFs 6 and 7 do not apply to this unit. Northern Mexican gartersnakes have been found in the Gila River near the Highway 180 crossing in 2002, 2013, and 2015, and just outside of Duck Creek near its confluence with the Gila River in 2018 (Hill 2007, pers. comm.; Hotle 2013, p.1; Geluso 2016, pers. comm.; Geluso 2018, pers. comm.; and Holycross *et al.* 2020, p. 717). Several reaches of the Gila River have been adversely affected by channelization and diversions, which have reduced or eliminated base flow. The PBFs in this unit may require special management due to competition with, and predation by, nonnative species that are present in this unit; water diversions; channelization; potential for high-intensity wildfires; and human development of areas adjacent to critical habitat.

Unit 2: Tonto Creek Unit

Unit 2 consists of 3,176 ac (1,285 ha) of critical habitat along 29 stream mi (47 km) of Tonto Creek. The Tonto Creek Unit is generally located near the towns of Gisela and Punkin Center, Arizona, in Gila County. The downstream end of critical habitat is the Conservation Storage elevation of Theodore Roosevelt Lake (2,151 ft (656 m)) near the

confluence with Ash Creek. The Tonto National Forest is the primary land manager in this unit, with additional lands privately owned.

Unit 2 is designated as critical habitat because it was occupied at the time of listing and as a whole, this unit contains PBFs 1, 2, 3, and 5, but PBF 4 is in degraded condition. PBFs 6 and 7 do not apply to this unit. Northern Mexican gartersnakes have been found in Tonto Creek in 2004, 2005, and 2010 to 2017 in the vicinity of Gisela, Arizona (Holycross *et al.* 2006, p. 42; Burger 2010, p. 1; Madara-Yagla 2010, p. 6; Madara-Yagla 2011, p. 6; Madara-Yagla 2012, pers. comm.; Nowak *et al.* 2015, Table 1; Nowak 2015, p. 2; Nowak *et al.* 2016, Table 1; Myrand *et al.* 2016, pp. 5–6; Myrand *et al.* 2017; Nowak 2017, p. 6; and Holycross *et al.* 2020, p. 717). Some reaches along Tonto Creek experience seasonal drying because of regional groundwater pumping, while others are affected by diversions. Development along private reaches of Tonto Creek may also affect terrestrial characteristics of northern Mexican gartersnake habitat. Mercury has been detected in fish samples within Tonto Creek, and further research is necessary to determine if mercury is bioaccumulating in the resident food chain. Theodore Roosevelt Lake is a nonnative sport fishery and supports predators of the northern Mexican gartersnake, so that the northern Mexican gartersnake may be subject to higher mortality from predation by nonnative fish at the downstream end of this unit, especially when these species are more likely to be present when the lake level is at Conservation Storage elevation. The PBFs in this unit may require special management due to competition with, and predation by, nonnative species that are present in this unit; water diversions causing loss of base flow; flood-control projects; and development of areas adjacent to or within critical habitat.

Unit 3: Verde River Subbasin Unit

Unit 3 consists of 5,265 ac (2,131 ha) along 64 stream mi (102 km) in three subunits: 39 stream mi (62 km) of the Verde River, including Tavaschi Marsh and Peck

Lake; 22 stream mi (35 km) of Oak Creek; and 4 stream mi (6 km) of Spring Creek. The Verde River Subbasin Unit is generally located near the towns of Cottonwood, Cornville, and Camp Verde, Arizona, in Yavapai County. The Verde River Subbasin Unit occurs on lands managed by the U.S. Forest Service on Coconino and Prescott National Forests; National Park Service (NPS) at Tuzigoot National Monument; Arizona State Parks at Deadhorse Ranch and Verde River Greenway State Natural Area; Arizona State Trust; and private entities.

Unit 3 is designated as critical habitat because it was occupied at the time of listing and as a whole, this unit contains PBFs 1, 2, 3, and 5, but PBF 4 is in degraded condition. Northern Mexican gartersnakes have been found in the Verde River at Tuzigoot National Monument, Tavaschi Marsh, Dead Horse Ranch State Park, Camp Verde Riparian Preserve, and upstream of Beasley Flat from 2003 to 2019; in and adjacent to Oak Creek at the Bubbling Ponds and Page Springs hatcheries from 2007 to 2018; and in Spring Creek downstream of Highway 89A in 2014 (Schmidt *et al.* 2005, Table 5.9; Holycross *et al.* 2006, Appendix A; Boyarski 2011, entire; Nowak *et al.* 2011, Table 1; Nowak 2012, pers. comm.; I. Emmons 2012, pers. comm.; Emmons and Nowak 2013, Table 1; Crowder 2014, pers. comm.; Nowak 2015, p.1; Emmons and Nowaks 2016, Appendix 1; Nowak 2017, pers. comm.; Greenawalt 2018, pers. comm.; Ryan 2018, pers. comm.; Ryan 2019, pers. comm.; Jenney 2019, pers. comm.; and Holycross *et al.* 2020, p. 717). Crayfish, bullfrogs, and nonnative, spiny-rayed fish are present in some of this unit. Proposed groundwater pumping of the Big Chino Aquifer may adversely affect future base flow in the Verde River. Development along the Verde River has eliminated habitat along portions of the Verde River through the Verde Valley. The PBFs in this unit may require special management due to competition with, and predation by, nonnative species that are present in this unit; water diversions; existing and proposed

groundwater pumping potentially resulting in drying of habitat; potential for high-intensity wildfires; and human development of areas adjacent to critical habitat.

We have excluded 225 ac (91 ha) of lands owned by the Yavapai-Apache Nation, and 142 ac (57 ha) of AGFD's Bubbling Ponds and Page Springs fish hatcheries in Oak Creek Subunit (see **Exclusions**, below).

Unit 4: Bill Williams River Subbasin Unit

Unit 4 consists of 2,245 ac (908 ha) along 13 stream mi (22 km) in two subunits: 8 stream mi (13 km) of Big Sandy River and 5 stream mi (9 km) of Santa Maria River.

The Bill Williams River Subbasin Unit is generally located in western Arizona, northeast of Parker, Arizona, in La Paz and Mohave Counties. The Bill Williams River Subbasin Unit occurs on lands managed by the Bureau of Land Management (BLM) within the Rawhide Mountains Wilderness, Swansea Wilderness, and Three Rivers Riparian Area of Critical Environmental Concern (ACEC); Arizona State Parks at Alamo Lake State Park; Arizona State Land Department; and private landowners.

Unit 4 is designated as critical habitat because it was occupied at the time of listing and as a whole, this unit contains PBFs 1, 2, 3, and 5, but PBF 4 is in degraded condition. PBFs 6 and 7 do not apply to this unit. Northern Mexican gartersnakes have been found in the Big Sandy River in 2010, 2015, and 2016 and in the Santa Maria River in 2015 and 2016 (Cotten 2015a and 2015b; Partridge 2015; O'Donnell *et al.* 2016; Sullivan *et al.* 2016; and Holycross *et al.* 2020). This unit contains lowland leopard frogs (*Rana yavapaiensis*), and native fish appear to be largely absent, although longfin dace (*Agosia chrysogaster*) have been detected in the Santa Maria River Subunit. Crayfish and several species of nonnative, spiny-rayed fish maintain populations in reaches of the three rivers included in the Bill Williams River Subbasin Unit. The PBFs in this unit may require special management due to competition with, and predation by, nonnative species that are present in this unit and flood-control projects.

We have excluded the entire Bill Williams River Subunit, including 1,476 ac (597 ha) of Federal, State, and private lands within the Lower Colorado River MSCP boundary, and 329 ac (133 ha) of AGFD's Planet Ranch Conservation and Wildlife Area property (see **Exclusions**, below).

Unit 5: Arivaca Cienega Unit

Unit 5 consists of 211 ac (86 ha), along 3 stream mi (5 km) of Arivaca Creek within Arivaca Cienega. The Arivaca Cienega Unit is generally located in southern Arizona, in and around the town of Arivaca in Pima County, Arizona. This unit occurs on lands managed by the Service at Buenos Aires NWR, Arizona State Land Department, and private landowners. Drought, bullfrogs, and crayfish are a concern in the Arivaca Cienega Unit.

Unit 5 is designated as critical habitat because it was occupied at the time of listing and as a whole, this unit contains PBFs 2 and 5, but PBFs 1, 3, and 4 are in degraded condition. PBFs 6 and 7 do not apply to this unit. Northern Mexican gartersnakes were found in Arivaca Cienega in 2000 (Rosen *et al.* 2001). The PBFs in this unit may require special management due to loss of perennial flow, as well as competition with, and predation by, nonnative species that are present in this unit.

Unit 6: Cienega Creek Subbasin Unit

Unit 6 consists of 2,083 ac (843 ha) along 46 stream mi (73 km) in four subunits: 30 stream mi (48 km) of Cienega Creek; 7 stream mi (12 km) of Empire Gulch, including Empire Wildlife Pond; 2 stream mi (3 km) of an unnamed drainage to Gaucho Tank, including Gaucho Tank; and 7 stream mi (11 km) of Gardner Canyon, including Maternity Wildlife Pond. The Cienega Creek Subbasin Unit is generally located in southern Arizona, southeast of the city of Tucson and town of Vail, north of the town of Sonoita, west of the Rincon Mountains, and east of the Santa Rita Mountains in Pima County. The unnamed drainage to Gaucho Tank is an ephemeral channel that may serve

as a movement corridor for northern Mexican gartersnakes. The Cienega Creek Subbasin Unit occurs on lands managed by BLM on Las Cienegas National Conservation Area (NCA), Arizona State Land Department, Pima County on Cienega Creek Preserve, and private landowners. Recent, ongoing bullfrog eradication on and around Las Cienegas NCA has reduced the threat of bullfrogs in much of this unit.

Unit 6 is designated as critical habitat because it was occupied at the time of listing and as a whole, this unit contains PBFs 1, 2, 3, 5, 6, and 7, but PBF 4 is in degraded condition. Northern Mexican gartersnakes have been found in Cienega Creek at the Cienega Creek Pima County Preserve and Las Cienegas NCA in 2000, 2001, and 2011; Empire Wildlife Pond in 2016, Gaucho Tank in 2017, and Maternity Wildlife Pond in 2015 (Rosen *et al.* 2001, Appendix 1; Caldwell 2012, pers. comm.; Hall 2012, pers. comm.; Hall 2016, pers. comm.; Hall 2017, pers. comm.; Hall 2019, pers. comm.; Simms 2019, pers. comm.; and Holycross *et al.* 2020, p. 717). Special management may be required to continue to promote the recovery or expansion of native leopard frogs and fish, continue bullfrog management, and eliminate or reduce other predatory nonnative species.

Unit 7: Upper Santa Cruz River Subbasin Unit

Unit 7 consists of 380 ac (154 ha) along 14 stream mi (23 km) in seven subunits: FS 799 Tank; 5 stream mi (8 km) of Sonoita Creek; 4 stream mi (7 km) of Scotia Canyon; 2 stream mi (3 km) of Cott Tank Drainage; 2 stream mi (3 km) of Santa Cruz River; 2 stream mi (4 km) of an unnamed drainage to Pasture 9 Tank; and 0.6 stream mi (1 km) of an unnamed drainage to Sheehy Spring. The latter two unnamed drainages are ephemeral channels that may serve as movement corridors for northern Mexican gartersnakes. The Upper Santa Cruz River Subbasin Unit is generally located in southern Arizona, south of the town of Sonoita and within the town of Patagonia, southeast of the Santa Rita Mountains, and west of the Patagonia Mountains in Santa Cruz and Cochise Counties.

The Upper Santa Cruz River Subbasin Unit occurs on lands managed by Coronado National Forest, Arizona State Parks at San Rafael State Natural Area, Arizona State Land Department, The Nature Conservancy, and private landowners.

Unit 7 is designated as critical habitat because it was occupied at the time of listing and as a whole, this unit contains PBFs 1, 2, 3, 5, 6, and 7, but PBF 4 is in degraded condition. Northern Mexican gartersnakes have been found in FS 799 Tank in 2007, 2016, and 2018; Sonoita Creek in 2013; Scotia Canyon from 2000 to 2018; Cott Tank Drainage in 2008; Santa Cruz River in 2006 to 2018; Pasture 9 Tank in 2012; and Sheehy Spring in 2000 (Rosen *et al.* 2001, Table 4; Holycross *et al.* 2006, Appendix A; Frederick 2008, pers. comm.; Jones 2007, pers. comm.; Jones 2013, pers. comm.; Jones 2009, pers. comm.; Servoss 2009, pers. comm.; Servoss 2018, pers. comm.; Akins 2012, pers. comm.; Lashway 2012, p. 5; Lashway 2014, p. 4; Lashway 2015, p. 4; Timmons 2014, pers. comm.; Timmons 2017, pers. comm.; Bookwalter 2014, pers. comm.; Cotten 2016, pers. comm.; Sorensen 2016, pers. comm.; Aaron 2017, pers. comm.; Ryan 2018, pers. comm.; and Holycross *et al.* 2020, p. 717). Native fish, American bullfrogs (*Rana catesbeiana*), tiger salamanders (*Ambystoma* spp.), and Chiricahua leopard frogs (*Rana chiricahuensis*) provide prey for northern Mexican gartersnakes in the Upper Santa Cruz River Subbasin Unit. Bullfrogs and nonnative, spiny-ray fish remain an issue in this unit. Special management may be required to continue to promote the recovery or expansion of native leopard frogs and fish and eliminate or reduce predatory nonnative species.

We have excluded 0.2 ac (0.1 ha) of State lands within the 60-ft (18-m) Roosevelt Reservation from the Santa Cruz River Subunit. We have also excluded a total of 116 ac (47 ha) of private lands within the following subunits: San Rafael Cattle Company's San Rafael Ranch in the Santa Cruz River Subunit, Unnamed Drainage to Pasture 9 Tank Subunit, and Unnamed Drainage to Sheehy Spring Subunit; and Unnamed Wildlife Pond Subunit.

Unit 8: Upper San Pedro River Subbasin Unit

Unit 8 consists of 5,834 ac (2,361 ha) in six subunits along 35 stream mi (56 km): 22 stream mi (35 km) of the San Pedro River; 6 stream mi (10 km) of the Babocomari River; 4 stream mi (6 km) in O'Donnell Canyon; 3 stream mi (km) in Post Canyon; 0.4 stream mi (0.6 km) in an unnamed drainage and Finley Tank, and House Pond. The Upper San Pedro River Subbasin Unit is generally located in southeastern Arizona, east and west of Sierra Vista and south of the town of Elgin, in Cochise and Santa Cruz Counties. The Upper San Pedro River Subbasin Unit occurs primarily on lands managed by BLM on the San Pedro River Riparian and Las Cienegas NCAs, and also includes lands managed by the U.S. Forest Service on Coronado National Forest, Arizona State Land Department, and private entities. The unit includes portions of the Canelo Hills Preserve owned by The Nature Conservancy and the Appleton-Whittell Research Ranch owned by Audubon Society and Federal landowners.

Unit 8 is designated as critical habitat because it was occupied at the time of listing and, as a whole, this unit contains PBFs 1, 2, 5, 6, and 7, but PBFs 3 and 4 are in degraded condition. Northern Mexican gartersnakes have been found in the San Pedro River near Highway 82 and State Route 90 in 2006 and 2018, Babocomari River in 2007 and 2009, O'Donnell Canyon on the Appleton-Whittell Research Ranch from 2000 to 2015, Post Canyon in 2009, Finley Tank in 2000, 2007 to 2009, and 2014; and House Pond in 2014 (Rosen *et al.* 2001, Appendix 1; Miscione 2009, pers. comm.; d'Orgeix 2011; d'Orgeix *et al.* 2013; Cogan 2014, pers. comm.; Cogan 2015, pers. comm.; Deecken 2014, pers. comm.; Miscione 2017, pers. comm.; and Ohlenkamp 2018, pers. comm.). Native fish and leopard frogs occur in House Pond, O'Donnell Canyon, and Post Canyon subunits and provide a prey base for northern Mexican gartersnakes. Crayfish, bullfrogs, and nonnative, spiny-rayed fish occur in the San Pedro River and Babocomari subunits and are an ongoing threat to northern Mexican gartersnakes. The PBFs in the

Upper San Pedro River Subbasin Unit may require special management due to competition with, and predation by, predatory nonnative species that are present in this unit.

We have excluded a total of 15 ac (6 ha) owned by a private ranch in the Post Canyon Subunit (see **Exclusions**, below).

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species listed under the Act or result in the destruction or adverse modification of critical habitat.

We published a final rule revising the definition of destruction or adverse modification on August 27, 2019 (84 FR 44976). Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, Tribal, local, or private lands that require a Federal permit (such as a permit from the Corps under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical

habitat—and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or carried out by a Federal agency—do not require section 7 consultation.

As a result of section 7 consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define “reasonable and prudent alternatives” (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Service Director’s opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 set forth requirements for Federal agencies to reinitiate formal consultation on previously reviewed actions. These requirements apply when the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law) and, subsequent to the previous consultation, we have listed a new species or designated critical habitat that may be affected by the Federal action, or the action has been modified in a manner that affects the species or critical habitat in a way not considered in the previous consultation. In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but the regulations also specify some exceptions to the requirement to reinitiate consultation on specific land management plans after subsequently listing a new species or designating new critical habitat. See the regulations for a description of those exceptions.

Application of the "Adverse Modification" Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that result in a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of the northern Mexican gartersnake. Such alterations may include, but are not limited to, those that alter the PBFs essential to the conservation of these species or that preclude or significantly delay development of such features. As discussed above, the role of critical habitat is to support PBFs essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal

action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation.

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the northern Mexican gartersnake. Some activities may have short-term negative effects to designated critical habitat but may also result in long-term benefits to the gartersnake.

These activities include, but are not limited to:

(1) Actions that would alter the amount, timing, or frequency of flow within a stream or the quantity of available water within aquatic or wetland habitat such that the prey base for the northern Mexican gartersnake, or the gartersnake itself, is appreciably diminished or threatened with extirpation. Such activities could include, but are not limited to: Water diversions; channelization; construction of any barriers or impediments within the active river channel; removal of flows in excess of those allotted under a given water right; construction of permanent or temporary diversion structures; groundwater pumping within aquifers associated with the river; or dewatering of isolated within-channel pools or constructed ponds. These activities could result in the reduction of the distribution or abundance of important gartersnake prey species, as well as reduce the distribution and amount of suitable physical habitat on a regional landscape for the gartersnake itself.

(2) Actions that would significantly increase sediment deposition or scouring within the stream channel or pond that is habitat for the northern Mexican gartersnake, or one or more of their prey species within the range of the northern Mexican gartersnake. Such activities could include, but are not limited to: Livestock grazing that results in erosion contaminating waters; road construction; commercial or urban development; channel alteration; timber harvest; prescribed fires or wildfire suppression; off-road vehicle or recreational use; and other alterations of watersheds and floodplains. These

activities could adversely affect the potential for gartersnake prey species to survive or breed. They may also reduce the likelihood that the gartersnake's prey species (e.g., leopard frogs) could move among subpopulations in a functioning metapopulation. This would, in turn, decrease the viability of metapopulations and their component local populations of prey species.

(3) Actions that would alter water chemistry beyond the tolerance limits of a gartersnake prey base. Such activities could include, but are not limited to: Release of chemicals, biological pollutants, or effluents into the surface water or into connected groundwater at a point source or by dispersed release (non-point source); aerial deposition of known toxicants, such as mercury, that are positively correlated to regional exceedances of water quality standards for these toxicants; livestock grazing that results in waters heavily polluted by feces; runoff from agricultural fields; roadside use of salts; aerial pesticide overspray; runoff from mine tailings or other mining activities; and ash flow and fire retardants from fires and fire suppression. These actions could adversely affect the ability of the habitat to support survival and reproduction of gartersnake prey species.

(4) Actions that would remove, diminish, or significantly alter the structural complexity of key natural structural habitat features in and adjacent to aquatic habitat. These features may be organic or inorganic, may be natural or constructed, and include (but are not limited to) boulders and boulder piles, rocks such as river cobble, downed trees or logs, debris jams, small mammal burrows, or leaf litter. Such activities could include, but are not limited to: Construction projects; flood control projects; vegetation management projects; or any project that requires a 404 permit from the Corps. These activities could result in a reduction of the amount or distribution of these key habitat features that are important for gartersnake thermoregulation, shelter, protection from predators, and foraging opportunities.

(5) Actions and structures that would physically block movement of gartersnakes or their prey species within or between regionally proximal populations or suitable habitat. Such actions and structures include, but are not limited to: Urban, industrial, or agricultural development; reservoirs stocked with predatory fishes, bullfrogs, or crayfish; highways that do not include reptile and amphibian fencing and culverts; and walls, dams, fences, canals, or other structures that could physically block movement of gartersnakes. These actions and structures could reduce or eliminate immigration and emigration among gartersnake populations, or that of their prey species, reducing the long-term viability of populations.

(6) Actions that would directly or indirectly result in the introduction, spread, or augmentation of predatory nonnative species in gartersnake habitat, or in habitat that is hydrologically connected, even if those segments are occasionally intermittent, or introduction of other species that compete with or prey on northern Mexican gartersnakes or its prey base, or introduce pathogens such as *Batrachochytrium dendrobatidis*, which is a serious threat to the amphibian prey base of northern Mexican gartersnakes. Possible actions could include, but are not limited to: Introducing or stocking nonnative, spiny-rayed fishes, bullfrogs, crayfish, tiger salamanders, or other predators of the prey base of northern Mexican gartersnakes; creating or sustaining a sport fishery that encourages use of nonnative live fish, crayfish, tiger salamanders, or frogs as bait; maintaining or operating reservoirs that act as source populations for predatory nonnative species within a watershed; constructing water diversions, canals, or other water conveyances that move water from one place to another and through which inadvertent transport of predatory nonnative species into northern Mexican gartersnake habitat may occur; and moving water, mud, wet equipment, or vehicles from one aquatic site to another, through which inadvertent transport of pathogens may occur. These activities directly or indirectly cause unnatural competition with and predation from nonnative aquatic predators on the

northern Mexican gartersnake, leading to significantly reduced recruitment within gartersnake populations and diminishment or extirpation of their prey base.

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that the Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan (INRMP) prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation. There are no Department of Defense (DoD) lands with a completed INRMP within the final critical habitat designation.

Consideration of Impacts under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he or she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he or she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making the determination to exclude a particular area, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. On December 18, 2020, we published a final rule in the Federal Register (85 FR 82376) revising portions of our regulations pertaining to exclusions of critical habitat. These final regulations became effective on January 19,

2021 and apply to critical habitat rules for which a proposed rule was published after January 19, 2021. Consequently, these new regulations do not apply to this final rule.

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive due to the protection from destruction of adverse modification as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat.

When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation or in the continuation, strengthening, or encouragement of partnerships. In the case of the northern Mexican gartersnake, the benefits of critical habitat include public awareness of the presence of the species and the importance of habitat protection, and, where a Federal nexus exists, increased habitat protection for the gartersnake due to the protection from destruction or adverse modification of critical habitat. Additionally, continued implementation of an ongoing management plan that provides equal to or more conservation than a critical habitat designation would reduce the benefits of including that specific area in the critical habitat designation.

We evaluate the existence of a conservation plan when considering the benefits of inclusion. We consider a variety of factors, including, but not limited to, whether the plan is finalized; how it provides for the conservation of the essential PBFs; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After identifying the benefits of inclusion and the benefits of exclusion, we

carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction of the species. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

As discussed below, based on the information provided by entities seeking exclusion, as well as any additional public comments we received, we evaluated whether certain lands in the proposed critical habitat were appropriate for exclusion from this final designation pursuant to section 4(b)(2) of the Act. We are excluding the following areas from critical habitat designation for the northern Mexican gartersnake:

TABLE 2. Areas excluded from critical habitat designation by critical habitat unit for the northern Mexican gartersnake.

<i>Unit Subunit</i>	<i>Landowner, Management Plan</i>	<i>Area Excluded (ac (ha))</i>
<i>Verde River Subbasin Unit</i>		
Verde River	Yavapai-Apache Nation	225 (91)
Oak Creek	Arizona Game and Fish Department, Page Springs Aquatic Resources Complex Management Plan	142 (57)
Unit total being excluded		367 (148)
<i>Bill Williams River Subbasin Unit</i>		
Bill Williams River	Multiple landowners, Lower Colorado River MSCP	1,805 (730)
Unit total being excluded		1,805 (730)
<i>Lower Colorado River Unit</i>		
Colorado River	USFWS, Lower Colorado River MSCP	4,467 (1,808)
Unit total being excluded		4,467 (1,808)
<i>Upper Santa Cruz River Subbasin Unit</i>		
Santa Cruz River	San Rafael Cattle Company, San Rafael Ranch Low-effect HCP	91 (37)
	Arizona State Parks, Department of Homeland Security – National Security	0.23 (0.09)

Unnamed Drainage and Pasture 9 Tank	San Rafael Cattle Company, San Rafael Ranch Low Effect HCP and AGFD's SHA	5 (2)
Unnamed Drainage and Sheehy Spring	San Rafael Cattle Company, San Rafael Ranch Low Effect HCP and AGFD's SHA	20 (8)
Unnamed Wildlife Pond	Private, AGFD's SHA	0.07 (0.03)
Unit total being excluded		116 (47)
<i>Upper San Pedro River Subbasin Unit</i>		
	Private Ranch, AGFD's SHA	15 (6)
Unit total being excluded		15 (6)
Grand Total		6,769 (2,739)

The Act affords a great degree of discretion to the Services in implementing section 4(b)(2). This discretion is applicable to a number of aspects of section 4(b)(2) including whether to enter into the discretionary 4(b)(2) exclusion analysis and the weights assigned to any particular factor used in the analysis. Most significant is that the decision to exclude is always discretionary, as the Act states that the Secretaries “may” exclude any areas. Under no circumstances is exclusion required under the second sentence of section 4(b)(2). There is no requirement to exclude, or even to enter into a discretionary 4(b)(2) exclusion analysis for any particular area identified as critical habitat. Accordingly, per our discretion, we have only done a full discretionary exclusion analysis when we received clearly articulated and reasoned rationale to exclude the area from this critical habitat designation.

Consideration of Economic Impacts

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis which, together with our narrative and interpretation of effects we consider our draft economic analysis (DEA) of the critical habitat designation

and related factors (IEc 2019, entire). The analysis, dated October 10, 2019, was made available for public review from April 28, 2020 through June 29, 2020 (see 85 FR 23608; April 28, 2020). The DEA addressed probable economic impacts of critical habitat designation for the northern Mexican gartersnake. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Additional information relevant to the probable incremental economic impacts of critical habitat designation for the northern Mexican gartersnake is summarized below and available in the screening analysis for the northern Mexican gartersnake (IEc 2019, entire), available at <http://www.regulations.gov>.

In our IEM, we attempted to clarify the distinction between the effects that will result from the species being listed and those attributable to the critical habitat designation (i.e., difference between the jeopardy and adverse modification standards) for the northern Mexican gartersnake's critical habitat. The following specific circumstances help to inform our evaluation: (1) The essential PBFs identified for critical habitat are the same features essential for the life requisites of the species; and (2) any actions that would result in sufficient harm or harassment to constitute jeopardy to the northern Mexican gartersnake would also likely adversely affect the essential PBFs of critical habitat. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for this species. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this designation of critical habitat.

The critical habitat designation for the northern Mexican gartersnake totals 20,326 ac (8,226 ha) comprising eight units. Land ownership within critical habitat for the northern Mexican gartersnake in acres is broken down as follows: Federal (53 percent),

State (Arizona and New Mexico) (5 percent), and private (41 percent) (see Table 1, above). All units are occupied.

In these areas, any actions that may affect the species would also affect designated critical habitat because the species is so dependent on habitat to fulfill its life-history functions. Therefore, any conservation measures to address impacts to the species would be the same as those to address impacts to critical habitat. Consequently, it is unlikely that any additional conservation efforts would be recommended to address the adverse modification standard over and above those recommended as necessary to avoid jeopardizing the continued existence of the northern Mexican gartersnake. Further, every unit of critical habitat overlaps with the ranges of a number of currently listed species and designated critical habitats. Therefore, the actual number of section 7 consultations is not expected to increase. The consultation would simply have to consider an additional species or critical habitat unit. While this additional analysis will require time and resources by the Federal action agency, the Service, and third parties, the probable incremental economic impacts of the critical habitat designation are expected to be limited to additional administrative costs and would not be significant (IEc 2019, entire). This is due to all units being occupied by the northern Mexican gartersnake.

Based on consultation history for the gartersnake, the number of future consultations, including technical assistances, is likely to be no more than 21 per year. The additional administrative cost of addressing adverse modification in these consultations is likely to be less than \$61,000 in a given year, including costs to the Service, the Federal action agency, and third parties (IEc 2019, p. 14), with approximately \$28,000 for formal consultations, \$32,000 for informal consultations, and \$1,100 for technical assistances. This is based on an individual technical assistance costing \$410, informal consultation costing \$2,500, and formal consultation costing

\$9,600. Therefore, the incremental costs associated with critical habitat are unlikely to exceed \$100 million in any single year and, therefore, would not be significant.

Exclusions Based on Economic Impacts

The Service considered the economic impacts of the critical habitat designation. We are not exercising our discretion to exclude any areas from this designation of critical habitat for the northern Mexican gartersnake based on economic impacts.

Exclusions Based on Impacts on National Security and Homeland Security

Section 4(a)(3)(B)(i) of the Act may not cover all DoD lands or areas that pose potential national-security concerns (e.g., a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a particular area is not covered under section 4(a)(3)(B)(i), national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of “critical habitat.” Nevertheless, when designating critical habitat under section 4(b)(2), the Service must consider impacts on national security, including homeland security, on lands or areas not covered by section 4(a)(3)(B)(i). Accordingly, we will always consider for exclusion from the designation areas for which DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns.

We cannot, however, automatically exclude requested areas. When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, it must provide a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. That justification could include demonstration of probable impacts, such as impacts to ongoing border-security patrols and surveillance activities, or a delay in training or facility construction as a result of compliance with section 7(a)(2) of the Act. If the agency requesting the exclusion does not provide us with

a reasonably specific justification, we will contact the agency to recommend that it provide a specific justification or clarification of its concerns relative to the probable incremental impact that could result from the designation. If the agency provides a reasonably specific justification, we will defer to the expert judgment of DoD, DHS, or another Federal agency as to: (1) whether activities on its lands or waters, or its activities on other lands or waters, have national-security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications would be adversely affected in the absence of an exclusion. In that circumstance, in conducting a discretionary section 4(b)(2) exclusion analysis, we will give great weight to national-security and homeland-security concerns in analyzing the benefits of exclusion.

I. U.S. Customs and Border Protection (CBP)/Department of Homeland Security (DHS)—U.S./Mexico Border Lands

We received a request from the CBP that the Roosevelt Reservation portion of critical habitat along the U.S./Mexico border be considered for exclusion under section 4(b)(2) of the Act for national security reasons. The Roosevelt Reservation is a 60-ft (18-m) wide strip of land owned by the Federal Government along the U.S. side of the U.S./Mexico border (DHS 2020, entire). The Reservation was established in 1907 by President Theodore Roosevelt to protect the public welfare by ordering that all public lands along the border in California, Arizona, and New Mexico “be reserved from the operation of the public land laws and kept free from obstruction as a protection against the smuggling of goods between the United States and [Mexico]” (35 Stat. 2136). No critical habitat was proposed along the border in New Mexico.

DHS and CBP requested an exclusion for a portion of the Roosevelt Reservation located in Santa Cruz County in Arizona. Their exclusion request incorrectly identified several subunits within the Upper Santa Cruz River Subbasin Unit—specifically the

Santa Cruz River, Unnamed Drainage and Sheehy Spring, and Unnamed Drainage and Pasture 9 Tank subunits. However, the only subunit affected by the Roosevelt Reservation is the Santa Cruz River Subunit. The area considered for exclusion totals 0.23 ac (0.09 ha). This subunit was considered to have been occupied at the time of listing and is currently occupied. This subunit extends a small distance north of the border beyond the 60-ft (18-m) wide Roosevelt Reservation (see the unit descriptions, above). The following analysis addresses only the 60-ft (18-m) wide Roosevelt Reservation along the border and not additional portions of the subunit.

The CBP, uses the Roosevelt Reservation for border security operations. The mission of the CBP is to “safeguard America's borders thereby protecting the public from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel.” The Roosevelt Reservation contains border security related infrastructure consisting of border barrier, lighting, a patrol road, and cleared vegetation of the 60-ft (18-m) wide reservation. CBP conducts routine patrols and law enforcement activities between the land ports of entries such as intervention of drug smuggling, human trafficking, and tracking of illegal immigrant foot traffic. Border enforcement activities can occur along the road bordering the barrier (within the 60-ft (18-m) Roosevelt Reservation) and outside of the Roosevelt Reservation, as needed for enforcement.

The Roosevelt Reservation, created in 1907, has historically been used for border enforcement actions in Arizona for decades and includes an existing patrol road in most areas. DHS states that they will continue to maintain and clear vegetation within the Roosevelt Reservation to ensure a safe operating environment for agents patrolling and enforcing border laws on the border. These border-security activities are not compatible with riparian or aquatic habitat. As a result, since designating the 60-ft (18-m) wide Roosevelt Reservation as critical habitat for the northern Mexican gartersnake would

interfere with ongoing border security operations, DHS states that the 60-ft (18-m) wide Roosevelt Reservation should be excluded because of national security reasons.

Currently, CBP accesses the project area; removes vegetation; and creates, maintains, and uses roads, drainage, and lighting, as well as conducts operations involved with homeland security. Actions pertaining to border security operations and potential future building, maintenance, and operation of the border infrastructure are considered to have negative effects to northern Mexican gartersnake individuals and habitat, based on the northern Mexican gartersnake's behaviors and biological needs.

Benefits of Inclusion—U.S./Mexico Border Lands—Roosevelt Reservation

An important benefit of including lands in a critical habitat designation is that the designation can serve to educate landowners and the public regarding the potential conservation value of an area, and it may help focus management and conservation efforts on areas of high value for certain species. The Santa Cruz River Subunit is important to northern Mexican gartersnakes because it has supported a reliably detected population for many years. Any information about the northern Mexican gartersnake that reaches a wide audience, including parties engaged in conservation activities, is valuable and would continue to encourage collaboration between DHS, CBP, and the Service. The Department of the Interior, U.S. Department of Agriculture (USDA), and DHS entered into a memorandum of understanding (MOU) in 2006 (DHS-DOI-USDA 2006, entire). The MOU provides consistent goals, principles, and guidance related to DHS, DOI, and USDA working together in fulfilling their mandated responsibilities. The MOU sets goals for communication, cooperation, and resolving conflicts while allowing for border security operations such as: Law enforcement operations; tactical infrastructure installation; use of roads; and minimization and/or prevention of significant impact on or impairment of natural and cultural resources, including those protected under the Act.

The border area is important because it provides connectivity between northern

Mexican gartersnake populations in the U.S. with those in Mexico. These corridors support primary prey species necessary to sustain northern Mexican gartersnake populations. Including the Roosevelt Reservation provides opportunities for education and public awareness concerning the aquatic and riparian community that supports northern Mexican gartersnakes and potentially encourages future restoration and minimization of adverse effects in areas designated. This may lead to retaining important habitat attributes and provide for naturally functioning drainages to maintain or restore the environmental qualities of the sites. Retaining hydrological processes that allow for drainages to fully function naturally will sustain riparian habitat upstream and downstream of the Roosevelt Reservation.

Benefits of Exclusion—U.S./Mexico Border Lands—Roosevelt Reservation

The benefits of excluding the 60-ft (18-m) Roosevelt Reservation area are significant. CBP has been tasked with enforcing national security along border areas of the United States. The Roosevelt Reservation and infrastructure within the area is a key component in assisting CBP to conduct its normal operations and fulfilling their national security mission along the southern border of the United States. CBP has identified the following activities and infrastructure occurring within the Roosevelt Reservation: barrier fencing, lighting systems, enforcement zones, patrol roads, cleared vegetation, vehicular patrol operations, ongoing border barrier maintenance, and illegal immigrant foot traffic and trespass. The designation of the Roosevelt Reservation may reduce CBP's availability of unencumbered space to support its operations. By excluding the 60-ft (18-m) Roosevelt Reservation the CBP would be able to fulfill its mission of securing the border and conduct necessary border patrol operations.

Excluding the Roosevelt Reservation from northern Mexican gartersnake critical habitat will enable CBP to continue actions without a need to consult on the possible effects of adverse modification to critical habitat. CBP states that excluding critical

habitat will also reduce the chances that they will need to obtain additional waivers that they might not otherwise need for border infrastructure projects.

Excluding the Roosevelt Reservation from the designation of critical habitat so that CBP border activities can continue could also have several positive effects to northern Mexican gartersnakes. For example, border infrastructure and patrolling could help prevent unauthorized trespass and resource destruction to areas adjacent to the border that may impact habitat for prey species of the northern Mexican gartersnake.

*Benefits of Exclusion Outweigh Benefits of Inclusion—U.S./Mexico Border Lands—
Roosevelt Reservation*

The benefits of including lands in a critical habitat designation include educating landowners, agencies, Tribes, and the public regarding the potential conservation value of an area, as well as potentially helping to focus conservation efforts on areas of high value for certain species and maintaining consistency with other areas being designated for other listed species within the Roosevelt Reservation. Because the Roosevelt Reservation only extends 60 ft (18 m) along the border, the amount of area associated with the exclusion is small, and the majority of critical habitat that is being designated adjacent to the Roosevelt Reservation remains in the final designation, allowing for the educational benefits to remain. In addition, we have an existing partnership with DHS and CBP whereby we coordinate our responsibilities. As a result, the educational benefits of inclusion are small.

The benefits of exclusion of the Roosevelt Reservation are significant. We base this on several reasons. First, the exclusion will allow DHS to conduct its mission of securing the border unimpaired from the designation of critical habitat for the northern Mexican gartersnake. We view this as a significant benefit of exclusion. Second, exclusion will allow CBP to continue maintaining border infrastructure and patrolling, thereby helping to prevent unauthorized trespass and resource destruction to areas

adjacent to the Roosevelt Reservation that may affect northern Mexican gartersnake habitat. We reviewed and evaluated the benefits of inclusion and benefits of exclusion for the 60-ft (18-m) Roosevelt Reservation for the DHS to conduct its national security operations and have determined the benefits of excluding outweigh the benefits of including the areas.

Exclusion Will Not Result in Extinction of the Species—U.S./Mexico Border Lands—Roosevelt Reservation

Because of the 2006 MOU, CBP has a track record of communicating with the Service and of remaining committed to seeking solutions to reduce harm along the border to listed species, including the northern Mexican gartersnake and its habitats. Thus, due to the protections provided already under the 2006 MOU, along with the small size of 0.23 ac (0.09 ha) of the area of the Roosevelt Reservation Area relative to the entire Upper Santa Cruz River Subbasin Unit ((380 ac (154 ha)) included in the proposed critical habitat designation, we have determined that exclusion of the 60-ft (18-m) Roosevelt Reservation lands from the critical habitat designation will not result in the extinction of the northern Mexican gartersnake. Based on the above described analysis, we have determined that the (60-ft (18-m)) Roosevelt Reservation within the Santa Cruz River Subunit is excluded under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of inclusion and will not cause the extinction of the species.

II. Department of Army—Fort Huachuca

We received comments from the U.S. Army installation at Fort Huachuca requesting the area outside the installation but within the San Pedro River and Babocomari River Subunits for the northern Mexican gartersnake be excluded from the final designation. The majority of lands within the San Pedro River Subunit are within the San Pedro Riparian NCA; a very small amount of lands are privately owned within

this subunit. Lands within the Babocomari River Subunit are roughly equally owned by the BLM (as part of San Pedro Riparian NCA) and privately owned, with a very small remainder owned by the Arizona State Land Department. Collectively, none of the lands within these two subunits are owned by the DoD, part of the lands managed under the Fort Huachuca's INRMP, or used for training.

The Army's rationale for requesting the exclusion was that any additional restrictions to groundwater pumping and water usage could affect their ability to increase staffing when needed or carry out missions critical to national security. In their comments, the Army also reiterated its commitment to continue taking appropriate measures to benefit the northern Mexican gartersnake, primarily focusing on water use reduction measures.

As stated above, the lands within the San Pedro River Subunit are primarily owned and managed by BLM. Declining base flow and habitat loss in the San Pedro River due to anthropogenic factors, drought, and climate change have long been a concern to landowners and communities in and near this subunit. In addition, the November 2013 Fort Huachuca Revised Biological Assessment (BA) on its operations, titled Programmatic Biological Assessment for Ongoing and Future Military Operations and Activities at Fort Huachuca, Arizona (U.S. Department of the Army 2013, p. 5-39), concluded that Army operations would have a neutral or potentially beneficial effect to the San Pedro River's base flow in San Pedro Riparian NCA. Regarding the Babocomari River Subunit, the Army stated that a reduction of 0.1 cubic feet per second (cfs) (attributable to Fort Huachuca operations) could occur by 2030, but was offset by conservation measures including the acquisition of conservation easements and implementation of urban-enhanced recharge measures which were not factored in by the model (U.S. Department of the Army 2013, pp. 538–539).

Additionally, the Fort concluded that the “modeled decline of 0.1 cfs is also at the

boundary of the estimated numerical noise of the groundwater modeling results from -0.1 to +0.1 cfs” (U.S. Department of the Army 2013, p. 39). Ultimately, the BA concluded that “although the Proposed Action may possibly have a minor effect on the northern Mexican gartersnake habitat locally on the lower Babocomari River, the Proposed Action would not jeopardize the continued existence of the proposed species or destroy or adversely modify proposed critical habitat” (U.S. Department of the Army 2013, p. 39). Within our subsequent 2014 biological and conference opinion under section 7 of the Act, we issued a conference report concurring that Fort Huachuca’s operational activities and groundwater pumping as related to the San Pedro and lower Babocomari rivers were not likely to adversely affect or modify proposed critical habitat for the northern Mexican gartersnake in either subunit (Service 2014, pp. 274–275). We based our conclusion largely on the overall, regional effect of a potential net reduction in base flow in the lower Babocomari River and the species’ natural history as a transient and opportunistic forager.

Lastly, although the Fort’s water conservation measures are intended to avoid, minimize, and/or offset the effects of water use to the San Pedro River and Babocomari River subunits, they do not constitute a northern Mexican gartersnake conservation plan or prevent water use or habitat loss by other entities affecting this area. The Fort’s water conservation actions are not sufficient to protect critical habitat from ongoing and future actions from other project proponents that could threaten base flow and suitable habitat for the northern Mexican gartersnake in these subunits. The Fort does not manage or control lands covered by these subunits, and the contribution of groundwater to riparian vegetation maintenance is only one component of northern Mexican gartersnake PBFs. The Service has engaged in several section 7 consultations on proposed actions that may affect northern Mexican gartersnake habitat but for which the Fort has no management authority, including herbicide treatment, fire management, grazing, exotic plant control,

mesquite removal, recreation, off-road vehicle use, development, and other proposed actions that may result in loss of water or suitable habitat. We will continue to engage in future consultations that may affect habitat in these active subunits. Given the Fort's groundwater use has been determined to have no or minimal effects to northern Mexican gartersnakes and their habitat, it is unlikely that there would be future restrictions on the Fort's groundwater use resulting from the designation of critical habitat. Designating critical habitat may actually help retain base flow and northern Mexican gartersnake habitat, through section 7 consultation with other entities affecting these subunits.

When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, it must provide a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. If such information is provided, we will conduct a discretionary analysis. However, here Fort Huachuca requested lands be excluded that were outside of the installation and not covered by its INMRP. It then did not appropriately support this request. As made clear in the comments to the Policy on Exclusions, it is within our discretion to not analyze national security requests that are not supported with specific justification (81 FR 7226). Accordingly, we are not excluding the area from this final rule due to national security.

Consideration of Other Relevant Impacts

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive due to the protection from destruction or adverse modification as a result of actions with a Federal nexus, the educational benefits of mapping essential habitat for recovery of the listed species, and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat. Proposed actions with a Federal nexus that may remove or reduce the quality or quantity of critical habitat must undergo Section 7 consultation for an adverse modification

analysis. Similarly, the listing of the northern Mexican gartersnake as a threatened species ensures that consultation under the jeopardy standard in either section 7 or section 10 of the Act would also be required in areas where members of the species are known to occur.

When considering the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation, or in the continuation, strengthening, or encouragement of partnerships (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act: 81 FR 7226; February 11, 2016).

After identifying the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction of the species. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

Exclusions Based on Other Relevant Impacts

Based on the information provided by entities seeking exclusion, any additional public comments we received, and the best scientific data available, we evaluated whether certain lands in the critical habitat were appropriate for exclusion from this final designation under section 4(b)(2) of the Act. If the analysis indicated that the benefits of excluding lands from the final designation outweigh the benefits of designating those lands as critical habitat, then we identified those areas for the Secretary to exercise his or her discretion to exclude the lands from the final designation, unless exclusion would result in extinction.

Under section 4(b)(2) of the Act, we considered any other relevant impacts, in addition to economic impacts and impacts on national security. When looking at “other

relevant impacts” we considered a number of factors including whether there are permitted conservation plans covering the species in the area such as HCPs, safe harbor agreements (SHAs), or candidate conservation agreements with assurances (CCAAs), or whether there are non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act: 81 FR 7226; February 11, 2016). In addition, we looked at the existence of Tribal conservation plans and partnerships, and considered the government-to-government relationship of the United States with Tribal entities. We also considered any social impacts that might occur because of the designation.

In the paragraphs below, we provide a detailed balancing analysis of the areas being excluded under section 4(b)(2) of the Act.

Private or Other Non-Federal Conservation Plans or Agreements and Partnerships, in General

We sometimes exclude specific areas from critical habitat designations based in part on the existence of private or other non-Federal conservation plans or agreements and their attendant partnerships. A conservation plan or agreement describes actions that are designed to provide for the conservation needs of a species and its habitat, and may include actions to reduce or mitigate negative effects on the species caused by activities on or adjacent to the area covered by the plan. Conservation plans or agreements can be developed by private entities with no Service involvement, or in partnership with the Service.

We evaluate a variety of factors to determine how the benefits of any exclusion and the benefits of inclusion are affected by the existence of private or other non-Federal conservation plans or agreements and their attendant partnerships when we undertake a discretionary section 4(b)(2) exclusion analysis. A non-exhaustive list of factors that we

will consider for non-permitted plans or agreements is shown below (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act: 81 FR 7226; February 11, 2016). These factors are not required elements of plans or agreements, and all items may not apply to every plan or agreement.

(i) The degree to which the plan or agreement provides for the conservation of the species or the essential PBFs (if present) for the species.

(ii) Whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan or agreement will be implemented.

(iii) The demonstrated implementation and success of the chosen conservation measures.

(iv) The degree to which the record of the plan supports a conclusion that a critical habitat designation would impair the realization of benefits expected from the plan, agreement, or partnership.

(v) The extent of public participation in the development of the conservation plan.

(vi) The degree to which there has been agency review and required determinations (e.g., State regulatory requirements), as necessary and appropriate.

(vii) Whether NEPA compliance was required.

(viii) Whether the plan or agreement contains a monitoring program and adaptive management to ensure that the conservation measures are effective and can be modified in the future in response to new information.

I. Duck Creek and Gila River Subunits within the Upper Gila River Subbasin Unit— Freeport-McMoRan Management Plan

Critical habitat was identified for the Gila River (500 ac (202 ha)) and Duck Creek (15 ac (6 ha)) on Freeport-McMoRan privately owned lands where the northern Mexican gartersnake occurs.

FMC completed their Spikedace and Loach Minnow Management Plan for the

Upper Gila River (FMC management plan), including Bear Creek and Mangas Creek in Grant County, New Mexico, in 2011. The FMC management plan was created in response to a proposed rule to designate critical habitat for the spikedace and loach minnow along reaches of the Gila River, Mangas Creek, and Bear Creek (75 FR 66482; October 28, 2010) owned by FMC. Water rights are also included in these land holdings. The majority of these lands are owned by Pacific Western Land Company (PWLC) and included the U-Bar Ranch, which has been managed under a rest-rotation livestock grazing strategy since approximately 1992. The focus of management actions pertaining to spikedace and loach minnow occur along middle section of the upper Gila River, the perennial portion of Mangas Creek, and lower portion of Bear Creek near the village of Gila within the Gila-Cliff Valley of New Mexico. No specific management actions pertaining to spikedace or loach minnow are proposed for Duck Creek in the FMC management plan. Therefore, we focus on management actions that pertain to the Gila River. While Duck Creek is not mentioned anywhere in the FMC management plan, the PWLC and Freeport-McMoRan Tyrone, Inc. own the land along the lowermost river mile along Duck Creek (within the U-Bar Ranch) near its confluence with the Gila River. Collectively and through existing water diversions, these lands and associated water rights support mining operations at the Tyrone Mine as well as livestock operations along the Gila River.

Livestock operations within the U-Bar Ranch consider the needs of the southwestern willow flycatcher and are considered to provide indirect benefits to spikedace and loach minnow under the FMC management plan. For the purposes of this analysis, we will review commitments made in the FMC management plan that pertain to spikedace and loach minnow, not the southwestern willow flycatcher, due to their ecological needs, which more closely overlap those of the northern Mexican gartersnake. In the past, FMC has funded fish surveys within the U-Bar Ranch along Gila River, as

well as Mangas and Bear Creeks. The FMC management plan intended to establish a framework for cooperation and coordination with the Service in connection with future resource management activities based on adaptive management principles. FMC lands are closed to public use, which eliminates potential concerns for effects to riparian and streambed habitat from off-highway vehicle use, camping, and hiking. Access to FMC lands are provided for wildlife survey needs.

The FMC management plan also commits to maintaining base flow in the Gila River within its planning area, through a cessation of water diversions at the Bill Evans Reservoir diversion, provided two conditions are met: (1) the Gila River is flowing at less than 25 cfs per day at USGS Gage 09431500, near Redrock, New Mexico (the nearest gage downstream from FMC's point of diversion); and (2) the water level in Bill Evans Reservoir is at least 4,672 ft above sea level. In the event that the first condition is satisfied but the reservoir level is below 4,672 ft above sea level, FMC will confer with NMGFD (which owns Bill Evans Reservoir) regarding temporary curtailment of water diversions. Therefore, maintaining minimum flow in the Gila River is not under the sole discretion of FMC. In the event water use changes become necessary, FMC provides us with notice of any significant changes in its water uses and diversions and will confer about impacts of such changes on spikedace and loach minnow habitat.

FMC has also committed to funding biennial fish surveys and the maintenance of survey locations, fisheries biologists, techniques, and protocols along the lands associated with the Gila River and provide subsequent data to us. Lastly, FMC committed to make reasonable efforts to coordinate and encourage adjacent landowners, as well as confer with us on opportunities to increase local public awareness, to assist in their conservation management and, when appropriate, assist other landowners to these ends. The FMC management plan considers adaptive management, which includes, if necessary, the development of alternative conservation measures at a total cost of \$500,000, for habitat

protection. Summarized, the FMC management plan commits to ongoing grazing using rest-rotation at moderate levels, the prohibition of public trespass unless for the purposes of surveys and monitoring for covered species (the northern Mexican gartersnake is not covered), limiting water diversion withdrawals from the Gila River provided certain criteria are met (dependent upon discretion of a third party), and a commitment to make reasonable efforts to coordinate with other landowners in the area on voluntary implementation of conservation measures.

Benefits of Inclusion—FMC Management Plan

As discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat. It is possible that in the future, Federal funding or permitting could occur on this privately owned land where a critical habitat designation may benefit northern Mexican gartersnake habitat. The implementation of potential conservation measures or conservation recommendations could provide important benefits to the continued conservation and recovery of the species in this area.

Because the northern Mexican gartersnake occurs in this area, the benefits of a critical habitat designation are reduced to the possible incremental benefit of critical habitat because the designation would not be the sole catalyst for initiating section 7 consultation. However, should a catastrophic event such as disease, drought, wildfire, chemical spill, etc., result in potential or actual extirpation of the gartersnake population in this area, designation of critical habitat will ensure future Federal actions do not result in adverse modification of critical habitat, allowing for future recovery actions to occur.

Another important benefit of including lands in a critical habitat designation is that it can serve to educate landowners, agencies, Tribes, and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high value for certain species. Any information about the northern Mexican gartersnake that reaches a wide audience, including parties engaged in conservation activities, is valuable. The designation of critical habitat may also affect the implementation of Federal laws, such as the Clean Water Act. These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of important sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

There are also specific reasons why the FMC management plan does not provide adequate conservation of the northern Mexican gartersnake. First, with respect to the northern Mexican gartersnake and Duck Creek, Duck Creek is not part of the FMC management plan's planning area; therefore, no specific measures have been proposed that would benefit the northern Mexican gartersnake in Duck Creek. Additional limitations of the FMC management plan include:

- While livestock grazing using modern strategies along with regular monitoring are not considered a particular concern for gartersnake conservation or recovery, we do not consider sustained livestock grazing within the riparian corridor to be a conservation benefit for the northern Mexican gartersnake because gartersnakes require adequate cover for protection from predators and to assist with thermoregulation.
- Fish survey protocols used in the plan (and in general) are not designed for gartersnake detection and will only provide data on the resident fish community, not specifically gartersnake abundance, population densities, or population trends.
- We have not identified camping, hiking, and OHV use as significant threats to gartersnake populations. Restricting these uses in the planning area only provides the

benefit of potentially reducing the risk of adverse human-gartersnake interactions that result from false species identification (confusion over being venomous) or general ophidiophobia (fear of snakes), which is common in the public sphere.

- The decision to change the amount of diverted Gila River water in the event of flows reaching 25 cfs or below are contingent upon an external entity to the FMC management plan and their desires for management of the Bill Evans Reservoir, adding uncertainty to this measure in terms of its implementation.

- Benefits of an unquantifiable and therefore unknown effort associated with enhancing cooperative conservation with adjacent landowners yields high uncertainty pertaining to both implementation of the measure and potential benefits realized by its implementation.

- The management plan does not commit to any conservation measures that directly address the leading threat facing the northern Mexican gartersnake across its range: the presence of predatory nonnative aquatic species.

Benefits of Exclusion—FMC Management Plan

One benefit from excluding FMC-owned lands as northern Mexican gartersnake critical habitat is the maintenance and strengthening of ongoing conservation partnerships. FMC has demonstrated a willingness to partner with the Service in conservation planning for several species in Arizona and New Mexico. Examples include becoming a conservation partner in the development and implementation of the Southwestern Willow Flycatcher Recovery Plan, and by solidifying their conservation actions in management plans submitted to us for the southwestern willow flycatcher, and for the spikedace and loach minnow (2007 and 2011). They have also demonstrated a willingness to conserve southwestern willow flycatcher and western yellow-billed cuckoo (*Coccyzus americanus*) habitat at Pinal Creek and to partner with us by exploring the initial stages of a habitat conservation plan.

Our collaborative relationship with FMC in the conservation arena makes a difference in our partnership with the numerous stakeholders involved in aquatic species recovery and management, and influences our ability to form partnerships with others. Concerns over perceived, added regulation potentially imposed by critical habitat could harm this collaborative relationship.

Because important areas for gartersnake conservation can occur on private lands, collaborative relationships with private landowners can be important in order to further recovery. The northern Mexican gartersnake and its habitat could benefit in some cases, from voluntary landowner management actions that implement appropriate and effective conservation strategies. Where consistent with the discretion provided by the Act, it is beneficial to implement policies that provide positive incentives to private landowners to voluntarily conserve natural resources and that remove or reduce disincentives to conservation (Wilcove *et al.* 1996, pp. 1–15; Bean 2002, pp. 1–7). Thus, it is important for northern Mexican gartersnake conservation to seek out continued conservation partnerships such as these with a proven partner, and to provide positive incentives for other private landowners who might be considering implementing voluntary conservation activities, but who have concerns about incurring incidental regulatory or economic impacts should a Federal nexus occur.

Benefits of Inclusion Outweigh the Benefits of Exclusion—FMC Management Plan

We have determined that the benefits of inclusion of the Gila River and Duck Creek on private lands managed by FMC outweigh the benefits of exclusion based on several factors. First, management prescriptions included in the FMC management plan do not apply to Duck Creek, which supports occupied northern Mexican gartersnake habitat, as “Duck Creek” is not mentioned anywhere in the plan; therefore, northern Mexican gartersnakes using Duck Creek will not benefit by actions proposed in the plan.

Above, we also outlined several instances where management actions set forth in

the plan either do not pertain directly to the needs of northern Mexican gartersnake critical habitat, do not have the necessary assurances that beneficial actions will indeed occur, or provide minimal benefits to gartersnake conservation and recovery in general.

After weighing the benefits of inclusion as northern Mexican gartersnake critical habitat against the benefits of exclusion, we have concluded that the benefits of including Freeport-McMoRan privately owned lands on the Gila River (500 ac (202 ha)) and Duck Creek (15 ac (6 ha)) outweigh those that would result from excluding these areas from critical habitat designation. Therefore, we did not exclude these lands from the final designation.

II. Oak Creek Subunit—AGFD’s Comprehensive Management Plan for the Page Springs Aquatic Resources Complex

Critical habitat for the northern Mexican gartersnake was identified for Oak Creek that includes 142 ac (57 ha) of lands privately owned by AGFD where the northern Mexican gartersnake occurs.

AGFD completed a comprehensive management plan for its Page Springs Aquatic Resources Complex (complex) in September 2020. Within this complex resides the Bubbling Ponds State Fish Hatchery, purchased in 1954, which has been occupied by the northern Mexican gartersnake for many years. In 2014, AGFD purchased an adjacent, private parcel known as the Page Family Property with the objective to protect native species, particularly the northern Mexican gartersnake, and to propagate native fish species (AGFD 2020, p. 3). AGFD’s vision for this complex is to “be Arizona’s premier aquatic resources facility, and to serve as a showcase for expertise in fish production, conservation, and research in the Southwest” (AGFD 2020, p. 3). Their comprehensive management plan identified nine objectives developed to support this vision: (1) enhance production of sportfish; (2) enhance captive propagation and grow out of native aquatic species; (3) enhance research on conservation and propagation of aquatic species;

(4) continue responsible water management; (5) enhance quality of native vegetation; (6) protect and enhance non-production sensitive species; (7) increase biosecurity; (8) provide recreation, education, and outreach for the public; and (9) provide clear direction for operation, maintenance, and communication (AGFD 2020, p. 3). In addition to this comprehensive management plan, AGFD committed to additional conservation measures specific to the northern Mexican gartersnake in a letter to our office dated December 11, 2020. We summarize those measures below.

Currently, AGFD is engaged in the following actions for the complex and is committed to continue into the future: (1) Maintain four fallow ponds to provide gartersnake habitat; (2) monitor gartersnake population and support research on gartersnakes; (3) minimize fish culture that involves large (adults) nonnative spiny-rayed fish species; (4) provide small trout to the Phoenix Zoo to benefit the captive gartersnake population there; (5) maintain overwintering habitat in surrounding areas; (6) continue to limit speeds for hatchery vehicles and prohibit unauthorized vehicles from driving on the property; (7) explore options and implement actions to deter avian predation of gartersnakes; (8) provide snake recognition training to hatchery staff; (9) manage Page Family Property for the benefit of gartersnakes; and (10) increase the potential for releases at the hatchery complex as new habitat is created.

Several native fish species of particular genetic lineages are planned for production at the hatchery complex, including loach minnow (White River, Upper Gila River - Gila River Forks, San Francisco River, Blue River, and Aravaipa Creek), spinedace (Aravaipa and Upper Gila River - Gila River Forks), roundtail chub (*Gila robusta*) (Verde River), Gila topminnow (mixed lineage, Red Rock, Middle Santa Cruz, Parker Canyon and Sharps Springs), desert pupfish (Cienega de Santa Clara), longfin dace (Gila River subbasin), and Sonora sucker (*Catostomus insignis*) (Gila River subbasin) (AGFD 2020, p. 8). Production and future stocking of these native fish species

are expected to benefit the northern Mexican gartersnake where these actions co-occur with extant gartersnake populations on the landscape, and are likely to provide on-site foraging opportunities for the gartersnake at the hatchery complex itself.

AGFD also intends to enhance the quality of native vegetation on the property by removing nonnative plant species and planting native plant species that could provide benefits to northern Mexican gartersnakes in terms of protective cover and thermoregulatory benefits. Of particular benefit is AGFD's plan to create a wetland area to benefit northern Mexican gartersnakes and other aquatic species when the recently added Page Family Property is developed. Plant species suitable for this area might include native cattails, bulrush, and sedges (AGFD 2020, p. 16). Should any fish rearing ponds be included on this recently added property, AGFD will design them to support native vegetation along their shorelines, as feasible, to support their use by northern Mexican gartersnakes (AGFD 2020, p. 19).

By protecting and enhancing non-production sensitive species, AGFD plans to expand habitat area for northern Mexican gartersnakes and to protect existing northern Mexican gartersnake habitat and the gartersnakes inhabiting these areas, particularly overwintering habitat that was identified through telemetry-based research. AGFD reports that failed piping has allowed adequate water flow into fallow ponds, and this has supported wetland growth, and development of habitat for northern Mexican gartersnakes. Adult northern Mexican gartersnakes use these ponds, and neonates annually emerge from them. AGFD has committed to maintaining this flow by relining the water line to support the ponds' suitability for continued use by northern Mexican gartersnakes (AGFD 2020, p. 17). Continued monitoring of the resident northern Mexican gartersnake population is also planned for the hatchery complex with the establishment and implementation of a standardized monitoring program for northern Mexican gartersnakes, using methods such as seasonal live trapping and occasional

(every 8 to 10 years) telemetry monitoring to increase understanding of gartersnake activity and relative abundance (AGFD 2020, p. 17).

Northern Mexican gartersnakes are exposed to particular threats at the hatchery complex that AGFD has committed to minimizing, including direct predation from sportfish raised on the property, injury from ingestion of spiny-rayed fish raised on the property, mortality associated with vehicular strikes by hatchery vehicles (Boyarski 2011, pp. 1–3), and domestic cat predation on northern Mexican gartersnakes. Northern Mexican gartersnakes have been observed being predated by nonnative sportfish (largemouth bass) raised on the hatchery complex (Young and Boyarski 2013). In addition, gartersnakes can sustain fatal injuries from ingesting spiny-rayed fish (Emmons *et al.* 2016b, p. 557, Fig. 3). To reduce these forms of gartersnake predation on hatchery grounds, AGFD has committed to keeping any spiny-rayed fish cultured at the hatchery no larger than 2 to 3 inches average in total body length to both ensure their spines will not kill a gartersnake attempting to forage on them and to reduce the likelihood of direct predation of gartersnakes by these spiny-rayed fish (AGFD 2020, p. 18). If larger spiny-rayed fish are desired for production, AGFD intends to use only one pond at the hatchery for this purpose, and construct snake-proof fencing to help keep northern Mexican gartersnakes out to minimize predation of gartersnakes by the fish and reduce the risk of potential foraging injuries to gartersnakes (AGFD 2020, p. 18). AGFD has also committed to limiting the speed of hatchery vehicles on the premises, training hatchery staff in gartersnake identification, and evaluating domestic cat management on the grounds to reduce predation effects to gartersnakes.

AGFD intends to build ponds specifically for the production of native baitfish on the hatchery complex grounds. Adjacent to these ponds, AGFD intends to build a “gartersnake pond” that will be managed specifically for their needs. Its close proximity to the native baitfish ponds will provide a valuable foraging area for the gartersnakes that

will have lower predation risk to foraging gartersnakes. In order to minimize the threat of bullfrog predation on neonatal, juvenile, and sub-adult size classes of gartersnakes, AGFD has committed to seasonally removing and eliminating eggs masses, tadpoles, and adult bullfrogs from the facility. In consideration of expanding sheltering opportunities for gartersnakes, AGFD will explore opportunities to create permanent debris piles or rock piles for gartersnake shelter within the footprint of the existing fallow ponds. Combined, this suite of management actions will provide additional shelter and feeding opportunities while minimizing predation at the hatchery on gartersnakes, which is expected to improve body condition, survivorship, fecundity, and population density such that this population of northern Mexican gartersnakes can serve as a source population for adjacent Oak Creek.

Under AGFD's commitment to public wildlife education, it intends to create opportunities for education at the hatchery, including interpretive displays at key locations, and to construct or enhance the existing visitor center at the hatchery complex (AGFD 2020, p. 23). Because the hatchery supports watchable wildlife opportunities for northern Mexican gartersnakes using these grounds, we anticipate considerable benefits in public education for the species, helping ensure continued public support of their conservation and recovery at the hatchery and throughout their range in the United States.

Benefits of Inclusion—AGFD's Comprehensive Management Plan for the Page Springs Aquatic Resources Complex

As discussed above under **Effects of Critical Habitat Designation, Section 7 Consultation**, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat. A

critical habitat designation requires Federal agencies to consult on whether their activity would destroy or adversely modify critical habitat to the point where recovery could not be achieved. Although this is private property, consultation is expected to regularly occur whenever our Wildlife and Sportfish Restoration Program assists AGFD's actions. Therefore, critical habitat could provide additional protection due to future Federal actions.

Because the species occurs in the area, the benefits of a critical habitat designation are reduced to the possible incremental benefit of critical habitat because the designation would not be the sole catalyst for initiating section 7 consultation. However, should a catastrophic event such as disease, drought, wildfire, chemical spill, etc., result in potential or statistically proven, actual extirpation of the northern Mexican gartersnake population in this area, designation of critical habitat would ensure future Federal actions do not result in adverse modification of critical habitat, allowing for future recovery actions to occur.

Another important benefit of including lands in a critical habitat designation is that it can serve to educate landowners, agencies, Tribes, and the public regarding the potential conservation value of an area, and this may focus and contribute to conservation efforts by other parties by clearly delineating areas of high conservation value for certain species. Any information about the northern Mexican gartersnake and its habitat that reaches a wide audience, including other parties engaged in conservation activities, would be considered valuable. However, AGFD has already planned a robust educational program for the public at the hatchery complex, which should benefit the conservation and recovery of the species. For these reasons, designation of critical habitat would have few, if any, additional benefits beyond those that will result from continued consultation for the presence of the species.

Benefits of Exclusion— AGFD's Comprehensive Management Plan for the Page Springs

Aquatic Resources Complex

Significant benefits would be realized by excluding this AGFD property, including: (1) the area is already conserved to a higher standard than that which critical habitat designation would provide; (2) managing lands consistent with one regulatory framework instead of two streamlines regulatory processes in an area where conservation of habitat is already occurring; and (3) encouraging continued meaningful collaboration and cooperation in surveys and research as we work towards recovery of the species. As mentioned above, AGFD's hatchery complex is important to northern Mexican gartersnakes because it has supported a reliably detected population for many years. Immediately above, we have detailed a significant number of conservation actions and their benefits to northern Mexican gartersnakes at the hatchery complex that continue or are planned for implementation at the hatchery. These actions promote long-term protection and conservation of the northern Mexican gartersnake and its habitat at the hatchery.

Additionally, section 6 of the Act, requires cooperation to the maximum extent practicable with the States in carrying out ESA programs (Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Activities, 81 FR 8663). Thus, it is important for northern Mexican gartersnake recovery to build on continued conservation activities such as these with a proven State partner, and to provide positive incentives for neighboring private landowners who might be considering implementing voluntary conservation activities, but who have concerns about incurring incidental regulatory or economic impacts.

The benefits of excluding this area from critical habitat will encourage continued conservation, land management, and coordination with the Service.

Benefits of Exclusion Outweigh the Benefits of Inclusion—AGFD's Comprehensive Management Plan for the Page Springs Aquatic Resources Complex

We have determined that the benefits of exclusion of this AGFD property, with the implementation of their comprehensive management plan, outweigh the benefits of inclusion, because AGFD is currently managing northern Mexican gartersnake habitat successfully and is committed to maintaining and enhancing that habitat. The benefits of including this AGFD property in critical habitat are few and are limited to educational benefits since these lands are privately owned and thus a trigger for section 7 consultation for adverse modification is lacking. The benefits of excluding this area from designation as critical habitat for the northern Mexican gartersnake are significant, and include managing lands consistent with one regulatory framework instead of two streamlines regulatory processes in an area where conservation of habitat is already occurring encouraging the continuation of adaptive management measures such as monitoring, surveys, research, enhancement, and restoration activities that AGFD currently implements and plans for the future.

Through their efforts at the hatchery, AGFD has demonstrated a commitment to management practices that have conserved and benefited the northern Mexican gartersnake population in that area. In addition, AGFD has funded scientific research at the hatchery in order to develop data that has contributed to the understanding of habitat use by this species. Considering the past and ongoing efforts of management and research to benefit the northern Mexican gartersnake, done in coordination and cooperation with the Service, we find the benefits of excluding portions of the hatchery outweigh the benefits of including it in critical habitat.

Exclusion Will Not Result in Extinction of the Species—AGFD's Comprehensive Management Plan for the Page Springs Aquatic Resources Complex

We have determined that exclusion of areas of this AGFD property will not result in extinction of the species, nor hinder its recovery, because its management will ensure the long-term persistence and protection of northern Mexican gartersnake habitat at the

hatchery and because AGFD is committed to greater conservation measures on their land than would be available through the designation of critical habitat. In addition, as discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, if a Federal action or permitting occurs, the known presence of northern Mexican gartersnakes would require evaluation under the jeopardy standard of section 7 of the Act, even absent the designation of critical habitat, and thus will protect the species against extinction. Based on the above analysis, we have determined that approximately 142 ac (57 ha) of land within the Oak Creek Subunit owned by AGFD are excluded under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of inclusion and will not cause the extinction of the species.

Private or Other Non-Federal Conservation Plans Related to Permits Under Section 10 of the Act

HCPs for incidental take permits under section 10(a)(1)(B) of the Act provide for partnerships with non-Federal entities to minimize and mitigate impacts to listed species and their habitat. In some cases, HCP permittees agree to do more for the conservation of the species and their habitats on private lands than designation of critical habitat would provide alone. We place great value on the partnerships that are developed during the preparation and implementation of HCPs.

CCAAs and SHAs are voluntary agreements designed to conserve candidate and listed species, respectively, on non-Federal lands. In exchange for actions that contribute to the conservation of species on non-Federal lands, participating property owners are covered by an “enhancement of survival” permit under section 10(a)(1)(A) of the Act, which authorizes incidental take of the covered species that may result from implementation of conservation actions, specific land uses, and, in the case of SHAs, the option to return to a baseline condition under the agreements. The Service also provides enrollees assurances that we will not impose further land-, water-, or resource-use

restrictions, or require additional commitments of land, water, or finances, beyond those agreed to in the agreements.

When we undertake a discretionary section 4(b)(2) exclusion analysis, we will always consider areas covered by an approved CCAA/SHA/HCP, and generally exclude such areas from a designation of critical habitat if three conditions are met:

(1) The permittee is properly implementing the CCAA/SHA/HCP and is expected to continue to do so for the term of the agreement. A CCAA/SHA/HCP is properly implemented if the permittee is, and has been, fully implementing the commitments and provisions in the CCAA/SHA/HCP, implementing agreement, and permit.

(2) The species for which critical habitat is being designated is a covered species in the CCAA/SHA/HCP, or very similar in its habitat requirements to a covered species. The recognition that the Services extend to such an agreement depends on the degree to which the conservation measures undertaken in the CCAA/SHA/HCP would also protect the habitat features of the similar species.

(3) The CCAA/SHA/HCP specifically addresses the habitat of the species for which critical habitat is being designated and meets the conservation needs of the species in the planning area (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act: 81 FR 7226; February 11, 2016).

I. Post Canyon Subunit—Private Ranch; Safe Harbor Agreement for the Chiricahua Leopard Frog

Critical habitat for the northern Mexican gartersnake was identified within the upper San Pedro River Subbasin, including 15 ac (6 ha) of private lands where this species occurs.

This private 79-ac (32-ha) property is enrolled in the AGFD's Statewide SHA for the Chiricahua Leopard Frog, via a certificate of exclusion which expires in 2025. The ranch owner may choose to re-enroll at that time. Of the 79 ac (32 ha), 15 ac (6 ha) was

proposed as critical habitat for the northern Mexican gartersnake. At the time of enrollment into the SHA, Chiricahua leopard frogs were not considered extant on the property. Three water features occur on the property: a water storage tank associated with a groundwater well, and two dry, earthen constructed ponds.

If external funding is secured, the SHA specifies that “a pond will be created for Chiricahua leopard frogs, which will be fed by a well and the landowner will commit to maintaining water in the pond throughout the year.” A lined pond was constructed and retrofitted with a solar well in 2017, with Partners for Fish and Wildlife funding, ensuring a relatively stable aquatic habitat is maintained. A Chiricahua leopard frog population has not yet been introduced or established in this pond, but other amphibian prey species such as toads may use the pond and provide foraging opportunities for resident northern Mexican gartersnakes. The landowner is also required to notify the AGFD and the Service if nonnative aquatic predators are observed using the feature, establish wetland and riparian vegetation around the feature, and ensure property access for population monitoring is provided.

Benefits of Inclusion—Safe Harbor Agreement for the Chiricahua Leopard Frog

As discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat. A critical habitat designation requires Federal agencies to consult on whether their activity would destroy or adversely modify critical habitat to the point where recovery could not be achieved. Funding from the Partners for Fish and Wildlife Program for management activities in this area would trigger section 7 consultation, but this has only

happened once for the construction of a lined pond and solar well in 2017. However, we do not anticipate future Federal actions to impact the northern Mexican gartersnake. The designation of critical habitat would provide a benefit by identifying the geographic area important for the northern Mexican gartersnake. Because the species has been listed since 2014, areas where the species occurs are well known and land managers understand the value of maintaining habitat for the species.

Because the species occurs in the area, the benefits of a critical habitat designation are reduced to the possible incremental benefit of critical habitat because the designation would not be the sole catalyst for initiating section 7 consultation. However, should a catastrophic event such as disease, drought, wildfire, chemical spill, etc., result in potential or statistically proven, actual extirpation of the gartersnake population in this area, designation of critical habitat would ensure future Federal actions do not result in adverse modification of critical habitat, allowing for future recovery actions to occur.

SHAs are temporary agreements and do not have assurances for a net conservation benefit in the long term. The Certificate of Inclusion allows the landowner to return to the baseline of the covered species (in this case, 0, because no Chiricahua leopard frogs were found when the property was surveyed prior to enrollment in the SHA) at any time without repercussions. Additionally, the landowner is not required to reenroll in the SHA once their Certificate of Inclusion expires. Therefore, designating critical habitat would ensure that this area be managed and kept in conservation as long as the northern Mexican gartersnake is listed under the Act.

Another important benefit of including lands in a critical habitat designation is that it can serve to educate landowners, agencies, Tribes, and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high value for certain species. Any information about the northern Mexican gartersnake that reaches a wide audience, including parties engaged in

conservation, ranching operations, and sportfishing activities, is valuable. The designation of critical habitat may also affect the implementation of Federal laws, such as the Clean Water Act. These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws; however, the listing of this species and consultations that have already occurred will provide this benefit. Therefore, in this case, we view the regulatory benefit of a critical habitat designation to be largely redundant with the benefit the species receives from listing under the Act, with only minimal additional benefits.

Benefits of Exclusion—Safe Harbor Agreement for the Chiricahua Leopard Frog

A considerable benefit of excluding this part of the Post Canyon Subunit as northern Mexican gartersnake critical habitat is the maintenance and strengthening of ongoing conservation partnerships. The private landowner signed the SHA in 2015, for a 10-year agreement to commit to several conservation actions for the Chiricahua leopard frog and installed a lined pond and solar well in 2017. The permittee is properly implementing the SHA and is expected to continue to do so for the term of the agreement.

Second, although the northern Mexican gartersnake is not a species covered by the SHA, the actions taken by the landowner for the Chiricahua leopard frog will similarly benefit the gartersnake. Both species require similar aquatic and terrestrial habitat and Chiricahua leopard frogs are a prey species of the northern Mexican gartersnake.

Third, the SHA addresses habitat needs for the species, including aquatic and terrestrial habitat, prey, and management of nonnative predators. Although a Chiricahua leopard frog population has not yet been introduced or established in this pond, other amphibian prey species such as toads may use the ponds. The landowner is also required

to notify the AGFD and the Service if nonnative aquatic predators are observed using the feature, establish wetland and riparian vegetation around the feature, and ensure property access for population monitoring is provided. These actions meet the conservation needs of the northern Mexican gartersnake as the snake needs wetland and riparian vegetation for protection from predators and thermoregulation and is similarly threatened by nonnative aquatic predators. Additional monitoring in the area will also benefit our understanding of the northern Mexican gartersnake population.

Moreover, our collaborative relationship with the private landowner and AGFD makes a difference in our partnership with the stakeholders involved with Chiricahua leopard frog and northern Mexican gartersnake management and recovery and influences our ability to form partnerships with others.

Because some important areas with northern Mexican gartersnake habitat occur on private lands, collaborative relationships with private landowners are important in recovering the species. The northern Mexican gartersnake and its habitat are expected to benefit from voluntary landowner management actions that implement appropriate and effective conservation strategies. Where consistent with the discretion provided by the Act, it is beneficial to implement policies that provide positive incentives to private landowners to voluntarily conserve natural resources and that remove or reduce disincentives to conservation (Wilcove *et al.* 1996, pp. 1–15; Bean 2002, pp. 1–7). Thus, it is important for the northern Mexican gartersnake recovery to build on continued conservation activities such as these with a proven partner, and to provide positive incentives for other private landowners who might be considering implementing voluntary conservation activities, but who have concerns about incurring incidental regulatory or economic impacts.

Benefits of Exclusion Outweigh the Benefits of Inclusion—Safe Harbor Agreement for the Chiricahua Leopard Frog

We have determined that the benefits of exclusion of 15 ac (6 ha) of the Post Canyon Subunit with implementation of the private landowner's Certificate of Inclusion for enrollment in the statewide SHA for the Chiricahua leopard frog outweigh the benefits of inclusion. As explained above, the SHA Certificate of Inclusion meets our criteria for exclusions for an SHA. The landowner has used Partners for Fish and Wildlife funding to construct a lined pond to provide habitat for the Chiricahua leopard frog and is committed to maintaining the pond for other amphibian prey species for resident northern Mexican gartersnakes, notifying AGFD and the Service if nonnative aquatic predators are observed using the feature, establishing wetland and riparian vegetation around the feature, and ensuring property access for population monitoring is provided. These actions serve to manage and protect habitat needed for northern Mexican gartersnakes above those conservation measures that may be required if the area were designated as critical habitat. In making this finding, we have weighed the benefits of exclusion against the benefits of including these lands as critical habitat.

Past, present, and future coordination with the landowner has provided and will continue to provide sufficient education regarding northern Mexican gartersnake habitat conservation needs on these lands, such that there would be minimal additional educational benefit from designation of critical habitat beyond those achieved from listing the species under the Act.

The incremental conservation and regulatory benefit of designating critical habitat on part of the Post Canyon Subunit would largely be redundant with the combined benefits of the existing management. Therefore, the incremental conservation and regulatory benefits of designating critical habitat in this area of the Post Canyon Subunit are minimal.

The benefits of designating critical habitat for the northern Mexican gartersnake in this area of the Post Canyon Subunit are relatively low in comparison to

the benefits of exclusion. The mentioned long-term land management commitments and the continuation of a conservation partnership will help foster the maintenance and development of northern Mexican gartersnake habitat. The pond will provide foraging habitat for northern Mexican gartersnakes, and the landowner will notify AGFD and the Service if nonnative aquatic predators are present. The Certificate of Inclusion outlines actions and commits to tasks that will enhance not only the northern Mexican gartersnake, but other amphibious and aquatic species and the overall health of the ecosystem.

Exclusion of these lands from critical habitat will help preserve and strengthen the conservation partnership we have developed with private landowners, and assist AGFD and the Service with fostering current and future partnerships and development of management plans.

Although a critical habitat designation would require Federal actions to consult on adverse modification, because of the landowner's commitment to continue implementing land management actions that maintain habitat for the Chiricahua leopard frog that will also serve as northern Mexican gartersnake habitat, the benefits of a critical habitat designation on this area of the Post Canyon Subunit are minimized. We anticipate that greater northern Mexican gartersnake conservation can be achieved through these management actions and relationships than through a critical habitat designation on private land where activities requiring Federal funding or permitting are expected to be rare.

We are committed to working with private landowners to further northern Mexican gartersnake conservation, as well as the conservation of other endangered and threatened species. Therefore, in consideration of the relevant impact to our partnership and the ongoing conservation management practices of private landowners and AGFD, we determined that the significant benefits of exclusion of this area from critical habitat

designation outweigh the benefits of inclusion of the area in the designation.

Exclusion Will Not Result in Extinction of the Species—Safe Harbor Agreement for the Chiricahua Leopard Frog

We find that the exclusion of these lands will not lead to the extinction of the northern Mexican gartersnake, nor hinder its recovery because long-term water and land management commitments will ensure the long-term persistence and protection of northern Mexican gartersnake habitat in this privately owned area in the Post Canyon Subunit. As discussed above under **Effects of Critical Habitat Designation, Section 7 Consultation**, if a Federal action or permitting occurs, the known presence of northern Mexican gartersnakes would require evaluation under the jeopardy standard of section 7 of the Act, even absent the designation of critical habitat, and thus will protect the species against extinction. Collectively, these elements provide assurances that the northern Mexican gartersnake will not go extinct as a result of excluding these riparian habitats from the critical habitat designation. After weighing the benefits of including this area in the critical habitat designation against the benefits of exclusion, we have concluded that the benefits of excluding this privately owned area of the Post Canyon Subunit with commitments to the SHA outweigh those that would result from designating this area as critical habitat. We have therefore excluded 15 ac (6 ha) of land from this final critical habitat designation pursuant to section 4(b)(2) of the Act.

II. Upper Santa Cruz River Subbasin Unit, Unnamed Wildlife Pond Subunit—Safe Harbor Agreement for Desert Pupfish and Gila Topminnow

Critical habitat for the northern Mexican gartersnake was identified within the upper Santa Cruz River Subbasin, which includes 0.07 ac (0.03 ha) of private land where this species occurs.

Signed in 2007, the AGFD's SHA for topminnow and desert pupfish is an umbrella document under which individual landowners in the entire Arizona range of

these native fish species on non-Federal and Tribal lands may participate. Gila topminnow and desert pupfish are prey species of the northern Mexican gartersnake. In 2018, this private pond, located within a private inholding and surrounded by Coronado National Forest lands, was enrolled in the Statewide SHA for topminnow and desert pupfish under a Certificate of Inclusion which is valid for 40 years, or until the year 2058. The pond and associated area surrounding it represent 0.7 ac (0.03 ha). As with all properties enrolled in this and similar agreements, access is provided for stocking and monitoring of covered species. The pond itself is managed in a manner conducive to the continued survival of stocked species, as per the agreement. There are currently plans to develop an adjacent, smaller pond that may serve as an ephemeral breeding habitat for native toads or other amphibian species that are prey for northern Mexican gartersnakes (Duncan 2020, pers. comm.).

Benefits of Inclusion—Safe Harbor Agreement for Desert Pupfish and Gila Topminnow

As discussed above under **Effects of Critical Habitat Designation, Section 7 Consultation**, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat. A critical habitat designation requires Federal agencies to consult on whether their activity would destroy or adversely modify critical habitat to the point where recovery could not be achieved. Should funding from the Service be used for management activities in this area, section 7 consultation would be required. However, because this area covered under this SHA is privately owned, we do not anticipate future Federal actions to impact the northern Mexican gartersnake. The designation of critical habitat would provide a benefit by identifying the geographic area important for the northern Mexican gartersnake.

However, because the species has been listed since 2014, areas where the species occurs are well known and land managers understand the value of maintaining habitat for the species.

Because the species occurs in the area, the benefits of a critical habitat designation are reduced to the possible incremental benefit of critical habitat because the designation would not be the sole catalyst for initiating section 7 consultation. However, should a catastrophic event such as disease, drought, wildfire, chemical spill, etc., result in potential or statistically proven, actual extirpation of the northern Mexican gartersnake population in this area, designation of critical habitat would ensure future Federal actions do not result in adverse modification of critical habitat, allowing for future recovery actions to occur.

SHAs are temporary agreements and do not have assurances for a net conservation benefit in the long term. The Certificate of Inclusion allows the landowner to return to the baseline of the covered species (in this case, 0, because no desert pupfish or Gila topminnow were found when the property was surveyed prior to enrollment in the SHA) at any time without repercussions. Additionally, the landowner is not required to reenroll in the SHA once their Certificate of Inclusion expires. Therefore, designating critical habitat would ensure that this area is managed and kept in conservation as long as the northern Mexican gartersnake is listed under the Act.

Another important benefit of including lands in a critical habitat designation is that it can serve to educate landowners, agencies, Tribes, and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high value for certain species. Any information about the northern Mexican gartersnake that reaches a wide audience, including parties engaged in conservation, ranching operations, and sportfishing activities, is valuable. The designation of critical habitat may also affect the implementation of Federal laws, such as

the Clean Water Act. These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws; however, the listing of this species and consultations that have already occurred will provide this benefit. Therefore, in this case, we view the regulatory benefit of a critical habitat designation to be largely redundant with the benefit the species receives from listing under the Act, with only minimal additional benefits.

Benefits of Exclusion—Safe Harbor Agreement for Desert Pupfish and Gila Topminnow

A considerable benefit of excluding this private pond in the Upper Santa Cruz River Subbasin Unit as northern Mexican gartersnake critical habitat is the maintenance and strengthening of ongoing conservation partnerships. The private landowner signed the SHA in 2018 for a 40-year agreement to provide access to stock, monitor the species covered under the SHA, and manage the pond for the continued survival of stocked species. The permittee is properly implementing the SHA and is expected to continue to do so for the term of the agreement.

Although northern Mexican gartersnake is not a species covered by the SHA, the actions taken by the landowner for the desert pupfish and Gila topminnow will similarly benefit the gartersnake. Both fish species and northern Mexican gartersnake require similar aquatic habitat provided by the landowner and the fish are a prey species of the northern Mexican gartersnake.

The SHA addresses habitat needs for the species, including aquatic and terrestrial habitat, prey, and management of nonnative predators. Although desert pupfish and Gila topminnow have not yet been introduced or established in this pond, other amphibian prey species of the northern Mexican gartersnake, including tiger salamanders, use the current pond. The landowner has demonstrated he is committed to implementation of the SHA in planning to develop an adjacent, smaller pond that may

serve as an ephemeral breeding habitat for native toads or other amphibian species that are prey for northern Mexican gartersnake (Duncan 2020, pers. comm.). The landowner also maintains vegetation around the ponds that provides terrestrial habitat for northern Mexican gartersnakes.

Additionally, our collaborative relationship with the private landowner and AGFD makes a difference in our partnership with the stakeholders involved with desert pupfish, Gila topminnow, and northern Mexican gartersnake management and recovery, and influences our ability to form partnerships with others.

Because some important areas with northern Mexican gartersnake habitat occur on private lands, collaborative relationships with private landowners are important in recovering the species. The northern Mexican gartersnake and its habitat are expected to benefit from voluntary landowner management actions that implement appropriate and effective conservation strategies. Where consistent with the discretion provided by the Act, it is beneficial to implement policies that provide positive incentives to private landowners to voluntarily conserve natural resources and that remove or reduce disincentives to conservation (Wilcove *et al.* 1996, pp. 1–15; Bean 2002, pp. 1–7). Thus, it is important for northern Mexican gartersnake recovery to build on continued conservation activities such as these with a proven partner, and to provide positive incentives for other private landowners who might be considering implementing voluntary conservation activities, but who have concerns about incurring incidental regulatory or economic impacts.

Benefits of Exclusion Outweigh the Benefits of Inclusion—Safe Harbor Agreement for Desert Pupfish and Gila Topminnow

We have determined that the benefits of exclusion of 0.7 ac (0.03 ha) of this private pond in the Upper Santa Cruz River Subbasin Unit, with implementation of the private landowner's Certificate of Inclusion for enrollment in the Statewide SHA for

the desert pupfish and Gila topminnow, outweigh the benefits of inclusion. In our determination, we considered and found that the HCP meets our criteria for exclusion for SHAs as explained above. The landowner is committed to maintaining the pond to serve as habitat for other amphibian prey species for resident northern Mexican gartersnakes and to ensuring that property access for population monitoring and stocking is provided. These actions serve to manage and protect habitat needed for northern Mexican gartersnakes above those conservation measures which may be required if the area were designated as critical habitat. In making this finding, we have weighed the benefits of exclusion against the benefits of including these lands as critical habitat.

Past, present, and future coordination with the landowner has provided, and will continue to provide, sufficient education regarding northern Mexican gartersnake habitat conservation needs on these lands, such that there would be minimal additional educational benefit from the designation of critical habitat beyond those achieved from listing the species under the Act.

The incremental conservation and regulatory benefit of designating critical habitat on part of the Upper Santa Cruz River Subbasin Unit would largely be redundant with the combined benefits of the existing management. Therefore, the incremental conservation and regulatory benefits of designating critical habitat in the pond are minimal.

The benefits of designating critical habitat for the northern Mexican gartersnake in this area of the Upper Santa Cruz River Subbasin Unit are relatively low in comparison to the benefits of exclusion. The mentioned long-term land management commitments and the continuation of a conservation partnership will help foster the maintenance and development of northern Mexican gartersnake habitat. The pond will provide foraging habitat for northern Mexican gartersnakes. The Certificate of Inclusion outlines actions and commits to tasks that will enhance not only the northern Mexican gartersnake, but other amphibious and aquatic species and the overall health of

the ecosystem.

Exclusion of these lands from critical habitat will help preserve and strengthen the conservation partnership we have developed with private landowners, and assist AGFD and the Service with fostering current and future partnerships and with development of management plans.

Although a critical habitat designation would require Federal agencies to consult on adverse modification, because of the low likelihood of future actions requiring Federal funding or permitting, and the landowner's commitment to continue implementing land management actions that maintain northern Mexican gartersnake habitat, the benefits of a critical habitat designation on this area of the unit are minimized. We anticipate that greater northern Mexican gartersnake conservation can be achieved through these management actions and relationships than through critical habitat designation on private land where actions requiring Federal funding or permitting are expected to be rare.

We are committed to working with private landowners to further northern Mexican gartersnake conservation, as well as the conservation of other endangered and threatened species. Therefore, in consideration of the relevant impact to our partnership and the ongoing conservation management practices of private landowners and AGFD, we determined that the significant benefits of exclusion outweigh the benefits of inclusion in the critical habitat designation.

Exclusion Will Not Result in Extinction of the Species—Safe Harbor Agreement for Desert Pupfish and Gila Topminnow

We find that the exclusion of these lands will not lead to the extinction of the northern Mexican gartersnake, nor hinder its recovery, because long-term water and land management commitments will ensure the long-term persistence and protection of northern Mexican gartersnake habitat in this privately owned area in the Upper Santa Cruz River Subbasin Unit. In addition, lands are small ((0.7 ac (0.03 ha)) relative to the

Santa Cruz River Subbasin Unit as a whole ((380 ac (154 ha)). As discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, if a Federal action or permitting occurs, the known presence of northern Mexican gartersnakes would require evaluation under the jeopardy standard of section 7 of the Act, even absent the designation of critical habitat, and thus will protect the species against extinction.

Collectively, these elements provide assurances that the northern Mexican gartersnake will not go extinct as a result of excluding these riparian habitats from the critical habitat designation. After weighing the benefits of including this area in critical habitat against the benefits of exclusion, we have concluded that the benefits of excluding this privately owned pond in the Upper Santa Cruz River Subbasin Unit with commitments to the SHA outweigh those that would result from designating this area as critical habitat. We have therefore excluded 0.7 ac (0.03 ha) of land from this final critical habitat designation pursuant to section 4(b)(2) of the Act.

III. Lower Colorado River and Bill Williams River—Lower Colorado River Multi-Species Conservation Program (LCR MSCP)

The Lower Colorado River Multi-Species Conservation Program HCP (2004, entire) was developed for areas along the lower Colorado River along the borders of Arizona, California, and Nevada, from Lake Mead to Mexico, in La Paz, Mohave, and Yuma Counties in Arizona; Imperial, Riverside, and San Bernardino Counties in California; and Clark County in Nevada. In 1995, U.S. Department of the Interior agencies; water, power, and wildlife resources agencies from Arizona, California, and Nevada; Native American Tribes; environmental interests; and recreational interests agreed to form a partnership to develop and implement a long-term endangered species compliance and management program for the historical floodplain of the lower Colorado River. The goal was to facilitate the development of an ecosystem HCP and coordination

with the various LCR MSCP Federal partners. Reclamation has taken lead for coordinating activities under the LCR MSCP.

A steering committee provides oversight to Reclamation's LCR MSCP program manager, operating under a funding and management agreement that was prepared among Federal, State, local, and Tribal party participants (LCR MSCP 2007, pp. 1–3). The potentially affected parties and other interested parties established a public process for developing the required documents and plans. Various public agencies and other nongovernmental groups have participated in developing the various components of the LCR MSCP. The LCR MSCP primarily covers activities associated with water storage, delivery, diversion, and hydroelectric production. The record of decision was signed by the Secretary of the Interior on April 2, 2005. An important catalyst of the effort was a 1997 jeopardy biological opinion for the southwestern willow flycatcher issued to Reclamation for lower Colorado River operations (Service 2005a, entire). The Federal agencies involved in the LCR MSCP include Reclamation, Bureau of Indian Affairs, National Park Service, BLM, Western Area Power Administration, and the Service. Native American Tribes involved in the LCR MSCP and owning lands within the planning area include the Colorado River Indians Tribes, Fort Mohave Tribe, Cocopah Tribe, Chemehuevi Tribe, and Fort Yuma (Quechan) Tribe.

On July 8, 2014, the Service listed the northern Mexican gartersnake as a threatened species under the Act (79 FR 38678). The northern Mexican gartersnake was not included as one of the covered species in the LCR MSCP because it was thought to be extirpated within the planning area. However, northern Mexican gartersnakes were found on the Bill Williams River between Planet Ranch and Alamo Dam in 2012, and in 2015, presence of the northern Mexican gartersnake was confirmed at the Beal Lake Conservation Area. On October 26, 2016, the LCR MSCP steering committee approved initiating discussions with the Service to add the northern Mexican gartersnake as a

covered species to the LCR MSCP for incidental take coverage in all seven reaches of the Lower Colorado River. On June 28, 2017, the LCR MSCP steering committee directed its chairperson, acting on behalf of the permittees, to request an amendment to the section 10(a)(1)(B) permit (Permit) by submitting a Federal Fish and Wildlife Permit Application Form and the HCP amendment to the Service. On March 5, 2018, the Service finalized the amendment package, including section 7 consultation and HCP permit, and the northern Mexican gartersnake was included under the LCR MSCP as a covered species.

The LCR MSCP planning area and off-site conservation areas (LCR MSCP implementation area) includes proposed northern Mexican gartersnake critical habitat along the Colorado River and along the Bill Williams River. The LCR MSCP will create and maintain 512 ac (207 ha) of marsh habitat and 984 ac (399 ha) of associated cottonwood willow riparian habitat specifically for the northern Mexican gartersnake, provide additional marsh habitat that becomes established along margins of 360 ac (146 ha) of backwater habitat that will be created for native fish species, and avoid and minimize operational and management impacts to the northern Mexican gartersnake over the 50-year life of the permit (2005 to 2055) (Lower Colorado River Multi-Species Conservation Program 2004, as amended 2018, pp. 5-30–5-36, Table 5-10, pp. 5-58–5-60). Additional research, management, monitoring, and protection of northern Mexican gartersnakes will occur as a conservation measure. In addition to northern Mexican gartersnake habitat creation and subsequent management, the LCR MSCP provides funds to ensure existing northern Mexican gartersnake habitat is maintained for the life of the program. Northern Mexican gartersnake management associated with the LCR MSCP is conducted in conjunction and coordination with management occurring on National Wildlife Refuges (Bill Williams, Havasu, Cibola, and Imperial), BLM, AGFD, and Corps along the LCR Bill Williams River.

On the Lower Colorado River and Bill Williams River, we identified 5,943 ac (2,405 ha) of proposed critical habitat for exclusion within the LCR MSCP implementation area of La Paz and Mohave Counties. Northern Mexican gartersnake management within the proposed units in the LCR MSCP planning area occurs on Havasu NWR, and on off-site conservation areas along the Bill Williams River including portions of the Planet Ranch property owned by AGFD, and BLM, private, and Corps lands east of Planet Ranch. These areas are considered to have been occupied at the time of listing and are currently occupied.

Reclamation, in its lead role as program manager for the LCR MSCP, requested excluding habitat within the entire 914,200-ac (369,964-ha) LCR MSCP implementation area from critical habitat under the rationale that conservation measures described in the LCR MSCP HCP provide protection and benefits to the northern Mexican gartersnake and its habitat (LCRMSCP 2004, as amended 2018, pp. 1–506; Reclamation 2020, p. 2). Because the entire 914,200-ac (369,964-ha) implementation area was not proposed as critical habitat, we are only analyzing exclusion of the areas proposed as critical habitat.

The habitat created by the LCR MSCP is already benefitting the northern Mexican gartersnake. Beal Lake Conservation Area on Havasu NWR has been colonized by the species. Prior to the LCR MSCP, Beal Lake was a 225-ac (91-ha), shallow backwater containing low-quality aquatic habitat. Reclamation dredged the lake to improve the habitat for razorback sucker (*Xyrauchen texanus*) and bonytail chub (*Gila elegans*), and then stocked the lake with native fish. Next, Reclamation used dredge material to create 106 ac (43 ha) of cottonwood-willow riparian habitat, which was planted from 2002–2004 and then augmented by the LCR MSCP from 2011–2013 to add moist soil conditions to specifically target the habitat requirements of the southwestern willow flycatcher. This involved adding a 14-ac (6-ha) marsh patch to the cottonwood-willow riparian habitat. Northern Mexican gartersnakes were discovered at Havasu NWR

near this marsh patch in 2015. The LCR MSCP continues to improve habitat at Beal Lake Conservation Area, and in 2018, the Havasu NWR and LCR MSCP agreed to expand the conservation area to approximately 1,000 ac (405 ha), including additional habitat for the northern Mexican gartersnake (Reclamation 2020, p. 8).

In December 2015, the LCR MSCP acquired a lease for Planet Ranch on the Bill Williams River to use a portion of this property for an LCR MSCP conservation area. The land and water rights were subsequently donated to the Arizona Game and Fish Commission. The acquisition of Planet Ranch secured the river corridor so that controlled flood events can periodically occur from Alamo Dam for riparian habitat establishment and management along the Bill Williams River. In addition to the passive restoration of riparian habitat along the Bill Williams River expected from these controlled flood events, cottonwood-willow habitat will be planted in areas that are not expected to flood. The LCR MSCP is constructing four disconnected backwaters adjacent to existing cottonwood-willow habitat on Planet Ranch totaling over 60 ac (24 ha). While these are being created as refuges for razorback suckers and bonytail chub, they will also provide habitat for northern Mexican gartersnakes that are currently found within dispersal distance of these sites. The ponds are designed to allow marsh vegetation to grow in the ponds as cover for the fish but the vegetation can also provide cover for gartersnakes and their prey. Public access will be restricted at the ponds to avoid introduction of fish and bullfrogs. Native frogs and toads are found on Planet Ranch and nearby on the Bill Williams River; this segment of the Bill Williams River does not have bullfrogs.

The portion of the Bill Williams River, from Alamo Dam to the confluence with the Colorado River, is of high conservation value for partners including the Service, LCR MSCP, AGFD, BLM, Corps, and various nongovernmental organizations. All of these entities participate in the Bill Williams River steering committee, which meets quarterly to coordinate activities impacting this area. Additionally, these entities, along with the

Service, are cooperating agencies to the Corps's amendment to the Alamo Dam Water Control Manual EIS. Amendment and planning to this water control manual is currently ongoing, and options are being considered that would benefit downstream riparian and river areas, and the northern Mexican gartersnake. This area has a long history of working with the Service to provide beneficial ecological flows, which benefit riparian obligate species, such as the northern Mexican gartersnake. The Service and Corps are in early consultation for the northern Mexican gartersnake.

Benefits of Inclusion—Lower Colorado River Multi-Species Conservation Plan (LCR MSCP)

As discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat. A critical habitat designation requires Federal agencies to consult on whether their activity would destroy or adversely modify critical habitat to the point where recovery could not be achieved. The areas within the LCR MSCP implementation area are occupied by the northern Mexican gartersnake and have undergone section 7 consultation. Additionally, the Corps is in early consultation with the Service for areas outside of the Planet Ranch Conservation area that will be affected by Alamo Dam operations. There may be some minor benefits from the designation of critical habitat within Havasu NWR along the lower Colorado River and along portions of the Bill Williams River (i.e., Havasu NWR and BLM lands) for land management actions because of the additional review required by Federal actions. As explained above, the northern Mexican gartersnake was thought to be extirpated from the LCR MSCP implementation until recent discoveries of the species

in 2012 on BLM lands along the Bill Williams River and in 2018 on Havasu NWR along the lower Colorado River. Because these Federal agencies manage open space for public use and wildlife, the types of actions evaluated would mostly be associated with recreation, hunting, habitat management, and public access, as well as possibly some land resource use.

The benefits of northern Mexican gartersnake critical habitat designation on lands managed by Federal partners within the LCR MSCP implementation area are limited. Inclusion of the northern Mexican gartersnake under the LCR MSCP, as amended in 2018, provides habitat replacement that offsets predicted habitat loss due to river operations, including the Havasu NWR proposed critical habitat reach. Reclamation manages lower Colorado River water storage, river regulation, and channel maintenance such that the river stays within its incised channel and can no longer flow onto the adjacent floodplain. As a result, Reclamation has no discretion to change these water management actions to allow a better functioning stream that would improve marsh habitat and surrounding riparian habitat along the LCR, including critical habitat on Havasu NWR. Improving the duration, magnitude, and timing of river flow would generate overbank flooding, create and recycle marsh and riparian habitat, and, therefore, improve the quality and abundance of northern Mexican gartersnake habitat. Because of the lack of flooding and the prevention of overbank flows, the floodplain can no longer support the pre-dam riparian forest and associated marsh habitat.

While land managers (BLM, NPS, NWRs, and Tribes) along the lower Colorado River floodplain conduct discretionary actions on their lands, the success of their conservation actions and impacts of other actions to restore pre-dam riparian forests are limited by the impacts of water management. Overall, the riparian forest and marsh land cover types managed by these land management agencies are not expected to be harmed further by site-specific land management actions because the quality of vegetation has

already been degraded. To the extent that remaining patches of riparian and marsh cover types, and northern Mexican gartersnake habitat, continue to exist, they are of great value for snake conservation. As a result, past section 7 consultations on land management agency actions within the proposed critical habitat along the lower Colorado River show that land management agencies conserve existing riparian vegetation and explore innovative strategies outside of the restrictions on water management to improve vegetation quality that could be used by northern Mexican gartersnakes. Because the regulated stream flow has caused habitat degradation and existing water management operations prevent any change in water management that can improve the riparian forest, land management agencies are unable to impact these river flow conditions, nor are they able to impact river flow conditions through nondiscretionary mandatory reasonable and prudent measures or alternatives resulting from any possible future section 7 consultation. Therefore, there are limited benefits to designating critical habitat on lands managed by Federal and Tribal partners within the LCR MSCP implementation area.

Another important benefit of including lands in a critical habitat designation is that the designation can serve to educate landowners, agencies, Tribes, and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high conservation value for certain species. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

Some educational and conservation benefits from reinforcing other environmental laws and regulations may also be gained from including the LCR MSCP implementation area within the northern Mexican gartersnake critical habitat designation. However, this conservation benefit can also be accomplished through ongoing education being conducted by the LCR MSCP. As long as the educational benefit is ongoing, the support of other laws and regulations is minimized. Ongoing outreach that educates local

communities about the LCR MSCP's program activities conducted to benefit species along the river includes conservation-themed community events, professional conferences, Project Water Education for Teachers (WET) workshops, school programs, youth conservation corps coordination, volunteer opportunities, and outdoor expos (LCR MSCP 2020, pp. 303–304). The annual Colorado River Terrestrial and Riparian meeting and Las Vegas Science and Technology Festival are two events funded by the MSCP. Because this is a fairly new northern Mexican gartersnake management area, educating individuals, agencies, and organizations about northern Mexican gartersnake biology is paramount and will be an ongoing process. In addition, the LCR MSCP in coordination with the Service, has developed and maintains a best management practices document and framework for the northern Mexican gartersnake. This document provides education, and avoidance and minimization measures, for activities conducted in sensitive northern Mexican gartersnake occupied habitat.

Benefits of Exclusion—Lower Colorado River Multi-Species Conservation Plan (LCR MSCP)

The benefits of excluding the LCR MSCP management areas from the designation are considerable, and include the conservation measures described above (land acquisition, management, and habitat development) and those associated with implementing conservation through enhancing and developing partnerships. The LCR MSCP has a long history of security and stability of conservation actions and funding for those activities. This stability comes from its myriad partners, cost sharing activities, and program structure, as a result of the hybrid nature of its section 7 biological opinion and 10(a)(1)(B) HCP permit framework.

A small benefit of excluding the LCR MSCP lands from critical habitat includes some reduction in administrative costs associated with engaging in the critical habitat portion of section 7 consultations due to the area being occupied and the species being

listed as threatened. Administrative costs include time spent in meetings, preparing letters and biological assessments, HCP amendments, a financial agreement amendment, an EIS reassessment, a new implementing agreement, and in the case of formal consultations, the development of the critical habitat component of a biological opinion.

The exclusion of the LCR MSCP lands from critical habitat as a result of the implementation of the LCR MSCP can help facilitate other cooperative conservation activities with other similarly situated dam operators or landowners. Continued cooperative relations with the States and a myriad of stakeholders is expected to influence other future partners and lead to greater conservation than would be achieved through multiple site-by-site, project-by-project efforts, and associated section 7 consultations. With the current degraded condition of the environmental baseline and limitations associated with changes to dam operations, the LCR MSCP conservation measures commit the program to create and manage at least 5,940 ac (2,404 ha) of cottonwood-willow to provide habitat for 14 species including terrestrial habitat for the northern Mexican gartersnake (Reclamation 2020a, p. 7). Of the 5,940 ac (2,404 ha) of cottonwood-willow, 984 ac (398 ha) will be created and managed near marshes to provide northern Mexican gartersnake habitat (LCR MSCP 2020, p. W-3). The program has created 120 ac (49 ha) of cottonwood-willow and 14 ac (5.7 ha) of marsh habitat within Havasu NWR, and will also manage 512 ac (208 ha) of marsh habitat specifically for the northern Mexican gartersnake. Marsh associated with backwaters that are disconnected from the lower Colorado River channel are the preferred habitat type to achieve LCR MSCP conservation goals for this species. Marsh associated with disconnected backwaters are managed to limit nonnative aquatic predatory species, to the extent practicable.

The benefits of excluding lands within the LCR MSCP plan area from critical habitat designation include recognizing the value of conservation benefits associated with

these HCP actions; encouraging actions that benefit multiple species; encouraging local participation in development of new HCPs; and facilitating the cooperative activities provided by the Service to landowners, communities, and counties in return for their voluntary adoption of the HCP. The additional cooperative activities and HCP creation are demonstrated by the highly visible LCR MSCP, and an example of this is the inclusion of the northern Mexican gartersnake in all seven reaches of the program's planning area after documenting presence of the gartersnake in one reach of the LCR.

The LCR MSCP will help generate important status and trend information for northern Mexican gartersnake recovery. In addition to specific northern Mexican gartersnake conservation actions, the development and implementation of this HCP provides regular monitoring of northern Mexican gartersnake habitat, distribution, and abundance over the 50-year permit. Since the species was first rediscovered on Havasu NWR in 2015, northern Mexican gartersnakes, including juveniles, have been detected in the 14-acre marsh patch created by the program, as well as in Topock Marsh on the NWR.

Excluding the LCR MSCP implementation area can incentivize other entities contemplating partnerships as they see the avoidance of additional regulatory burdens once conservation strategies have already been agreed to through our permitting process. Private entities are motivated to work with the Service collaboratively to develop voluntary HCPs because of the regulatory certainty provided by an incidental take permit under section 10(a)(1)(B) of the Act with associated "No Surprises" assurances. This collaboration often provides greater conservation benefits than could be achieved through strictly regulatory approaches, such as critical habitat designation. The conservation benefits resulting from this collaborative approach are built upon a foundation of mutual trust and understanding. It has taken considerable time and effort to establish this foundation of mutual trust and understanding, which is one reason it often takes several

years to develop a successful HCP. Excluding this area from critical habitat would help promote and honor that trust that we have built with our HCP partners by providing greater certainty for permittees that, once appropriate conservation measures have been agreed to and consulted on for listed and sensitive species, additional consultation will not be necessary.

Our collaborative relationships with the LCR MSCP permittees clearly make a difference in our partnership with the numerous stakeholders involved and influence our ability to form partnerships with others. Concerns over perceived added regulation potentially imposed by critical habitat after working to ensure that the conservation needs of the species are met could harm this collaborative relationship and lead to distrust. Our experience has demonstrated that successful completion of one HCP has resulted in the development of other conservation efforts and HCPs with other landowners. Partners associated with the LCR MSCP also established HCPs with the Service in central Arizona.

The benefits of excluding this HCP from critical habitat designation include relieving Federal agencies, State agencies, landowners, communities, and counties of any additional regulatory burden for water management actions that might be imposed by critical habitat. The LCR MSCP took many years to develop and, upon completion, became a river-long conservation plan that will pave the way to define northern Mexican gartersnake recovery objectives within the implementation area. This HCP provides northern Mexican gartersnake conservation benefits and commitments toward habitat development and management, and northern Mexican gartersnake surveys and studies that could not be achieved through project-by-project section 7 consultations. Imposing an additional regulatory review after the HCP is completed, solely as a result of the designation of critical habitat, may undermine conservation efforts and partnerships in many areas. In fact, it could result in the loss of species' benefits if future participants

abandon the voluntary HCP process. Designation of critical habitat along the LCR and Bill Williams River could be viewed as a disincentive to those entities currently developing HCPs or contemplating them in the future. We find the section 7 consultation process for a designation of critical habitat, above and beyond that which is already required for the species, is unlikely to result in additional protections for the northern Mexican gartersnake on lands within the LCR MSCP planning and implementation area (which includes Service, BLM, and non-Federal lands).

Benefits of Exclusion Outweigh the Benefits of Inclusion—Lower Colorado River Multi-Species Conservation Plan (LCR MSCP)

We have determined that the benefits of excluding the LCR MSCP implementation area along the lower Colorado River within the States of Arizona and California from the designation of northern Mexican gartersnake critical habitat on all Federal, State, and non-Federal lands outweigh the benefits of inclusion. In our determination, we considered and found that the HCP meets our criteria for exclusion for HCPs. First, the LCR MSCP meets the criteria for Reclamation and the MSCP partners are properly implementing the HCP and are expected to continue to do so for the term of the agreement. Second, northern Mexican gartersnake is a covered species under the 50-year permit for the LCR MSCP. Third, the LCR MSCP specifically addresses the habitat of northern Mexican gartersnakes, and meets conservation needs of the species. Conservation actions included within the LCR MSCP implementation area, combined with the conservation efforts of other land managers, have already created and will continue to create and manage habitat that benefits the northern Mexican gartersnake and other native aquatic and riparian-dependent species. Each of these criteria are further explained below.

Under section 7 of the Act, critical habitat designation will provide little additional benefit to the northern Mexican gartersnake within the boundaries of the LCR

MSCP. The catalyst for the LCR MSCP was largely a result of the jeopardy biological opinion (Service 1997, entire) for the southwestern willow flycatcher we provided to Reclamation for its LCR operations (Service 2005a, entire). The Colorado River is managed and operated under numerous compacts, Federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the “Law of the River” (LCR MSCP 2004, as amended 2018). The Law of the River, which protects the regulation and delivery of Colorado River water to the western United States, prevents altering the regulation of the Colorado River for the benefit of a more naturally functioning system, which can create and recycle marsh and riparian habitat cover types and northern Mexican gartersnake habitat. As a result, the LCR MSCP and its implementing agreement are designed to ensure northern Mexican gartersnake conservation within the planning area and include management measures to protect, restore, enhance, manage, research, and monitor northern Mexican gartersnake habitat (along the Colorado River and at mitigation sites). The adequacy of LCR MSCP’s conservation measures to protect the northern Mexican gartersnake and its habitat have undergone evaluation under a section 7 consultation under the Act, reaching a non-jeopardy conclusion. Therefore, the benefit of including the LCR MSCP implementation area to require section 7 consultation for critical habitat is minimized.

The commitment by the LCR MSCP partners to northern Mexican gartersnake conservation throughout the implementation area, and not just within proposed critical habitat, is considerable (see the introductory statement under *Private or Other Non-Federal Conservation Plans Related to Permits Under Section 10 of the Act*, above). The LCR MSCP partners commit through implementation of their permit to developing, managing, and protecting 1,227 ac (497 ha) of northern Mexican gartersnake habitat consisting of cottonwood-willow and marsh land cover types within the boundaries of their implementation area (LCR MSCP 2004, as amended 2018).

This HCP involved public participation through public notices and comment periods associated with the NEPA process prior to being approved. Additionally, this HCP, which took about a decade to complete, is one of the largest HCPs in the country, and the only hybrid (section 7 and 10(a)(1)(B) permit), with an extensive list of stakeholders and permittees from California, Arizona, and Nevada. Therefore, the agencies, States, counties, cities, and other stakeholders that manage the habitat are aware of the importance of portions of the LCR MSCP implementation area for the northern Mexican gartersnake. For these reasons, although we have determined that designation of critical habitat along the LCR MSCP implementation area would provide some additional educational benefit, much of this is already occurring through the LCR MSCP.

Covered activities under the LCR MSCP are not the only possible impacts to northern Mexican gartersnake habitat along the lower Colorado River on Havasu NWR and along Bill Williams River. There are projects that were developed, funded, permitted, and implemented by Federal agencies such as Reclamation, BLM, and the Service currently ongoing that are not covered by the LCR MSCP. Fire management, habitat restoration, recreation, and other activities have the ability to adversely affect the northern Mexican gartersnake and critical habitat. Minor changes in habitat restoration, fire management, and recreation could occur as result of a critical habitat designation in the form of additional discretionary conservation recommendations to reduce impacts to critical habitat. Therefore, if any portions of the LCR MSCP implementation area were designated as critical habitat, there may be some benefit through consultation under the adverse modification standard for actions not covered by the LCR MSCP.

Excluding the proposed critical habitat areas for the northern Mexican gartersnake in the LCR MSCP implementation area would eliminate some small additional administrative effort and cost during the consultation process pursuant to section 7 of the Act. Excluding these areas of the LCR MSCP implementation area would continue to

help foster development of future HCPs and strengthen our relationship with Arizona, California, and Nevada permittees and stakeholders, eliminating regulatory uncertainty associated with permittees and stakeholders. Excluding these areas of the LCR MSCP implementation area also would eliminate any possible risk to water storage, delivery, diversion, and hydroelectric production to Arizona, California, and Nevada, and thereby would eliminate significant potential economic costs due to a critical habitat designation. We have, therefore, concluded that the benefits to the northern Mexican gartersnake and its habitat as result of the improvement, maintenance, and management activities attributed to the LCR MSCP, and those additional efforts conducted by NWRs, BLM, and other land managers, outweigh those that would result from the addition of a critical habitat designation. As such, we have excluded these lands from the final critical habitat designation pursuant to section 4(b)(2) of the Act.

Exclusion Will Not Result in Extinction of the Species—Lower Colorado River Multi-Species Conservation Plan (LCR MSCP)

We have determined that exclusion of the Colorado River and Bill Williams River within the LCR MSCP implementation area will not result in extinction of the northern Mexican gartersnake. As discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, if a Federal action or permitting occurs, the known presence of the northern Mexican gartersnake would require evaluation under the jeopardy standard of section 7 of the Act, even absent the designation of critical habitat, and thus will protect the species against extinction. Second, the amount of northern Mexican gartersnake habitat being created as result of implementing the LCR MSCP, combined with management by other land managers, is expected to be able to provide substantial aquatic and terrestrial habitat for the species. The implementing agreement establishes a 50-year commitment to accomplish these tasks. Overall, we expect greater northern Mexican gartersnake conservation through these commitments than through

project-by-project evaluation resulting from a critical habitat designation. Accordingly, we have determined that the LCR MSCP area should be excluded under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of inclusion and will not cause the extinction of the species. Therefore, we are excluding the entire Lower Colorado River Unit (4,467 ac (1,808 ha)) that occurs in the LCR MSCP implementation area along the Colorado River, and a portion of the Bill Williams River Unit (1,476 ac (597 ha)) that occurs in the LCR MSCP off-site conservation area from the final critical habitat designation.

IV. Santa Cruz River, Unnamed Drainage and Pasture 9 Tank, Unnamed Drainage and Sheehy Spring Subunits—San Rafael Ranch Low-Effect Habitat Conservation Plan

Critical habitat for the northern Mexican gartersnake was identified within the Upper Santa Cruz River Subbasin Unit that includes 116 ac (47 ha) of private lands on the San Rafael Ranch where this species occurs.

Completed in 2015, the San Rafael Ranch low-effect HCP outlines a 30-year strategy to continue cattle ranching operations on the San Rafael Ranch while providing habitat conditions favorable to the management and restoration of several listed and unlisted species. Covered species are all associated with riparian and aquatic habitat and include the northern Mexican gartersnake, Sonoran tiger salamander (*Ambystoma mavortium stebbinsi*), Gila chub (*Gila intermedia*), Huachuca springsnail (*Pyrgulopsis thompsoni*), Canelo Hill's ladies' tresses (*Spiranthes delitescens*), and Huachuca water umbel (*Lilaeopsis schaffneriana* var. *recurva*). In addition, portions of the San Rafael Ranch are enrolled, under Certificate of Inclusion, in the Statewide SHAs for Chiricahua leopard frog and Gila topminnow to provide conservation incentives and benefits for these two gartersnake prey species. Collectively, these plans and agreements provide a conservation strategy that supports the needs of many species, including the northern Mexican gartersnake and its important prey species.

Habitat in this planning area has been improved by conservation-based grazing practices, including grazing at sustainable levels, adding new water sources, and deferring grazing in riparian pastures from April to November each year. These practices have provided a net increase of wetted area and improved riparian and upland habitat that provide more opportunity for aquatic species to expand, or to be reintroduced, within the planning area. Maintaining and managing constructed ponds in the planning area is of particular benefit to the northern Mexican gartersnake because these water sources become more drought-resistant and provide reliable habitat for primary prey species including Sonora tiger salamanders, various anurans, and native fish. In addition to managing and maintaining water sources, the San Rafael Cattle Company added 21 water sources to the planning area, which improves livestock distribution and lessens impacts of grazing, as well as increases foraging opportunities for northern Mexican gartersnakes. The use of fencing around many dirt tanks has led to improved cover conditions that benefit the northern Mexican gartersnake. Lastly, the San Rafael Ranch low-effect HCP fosters the removal of nonnative aquatic predatory species, which is critical to the conservation and recovery of northern Mexican gartersnakes.

Benefits of Inclusion—San Rafael Ranch Low-Effect Habitat Conservation Plan

As discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat. A critical habitat designation requires Federal agencies to consult on whether their activity would destroy or adversely modify critical habitat to the point where recovery could not be achieved. As this is a private property, consultation would be rare, and critical habitat

is not anticipated to have much effect due to lack of Federal actions. Given the anticipated lack of section 7 consultation, the dependence on private conservation actions is more important.

Because the northern Mexican gartersnake occurs in the area, the benefits of a critical habitat designation are reduced to the possible incremental benefit of critical habitat because the designation would not be the sole catalyst for initiating section 7 consultation. However, should a catastrophic event such as disease, drought, wildfire, chemical spill, etc., result in potential or statistically proven, actual extirpation of the gartersnake population in this area, designation of critical habitat would ensure future Federal actions do not result in adverse modification of critical habitat, allowing for future recovery actions to occur.

Another important benefit of including lands in a critical habitat designation is that it can serve to educate landowners, agencies, Tribes, and the public regarding the potential conservation value of an area, and this may focus and contribute to conservation efforts by other parties by clearly delineating areas of high conservation value for certain species. Any information about the northern Mexican gartersnake and its habitat that reaches a wide audience, including other parties engaged in conservation activities, would be considered valuable. The San Rafael Ranch is already working with the Service to address the conservation and recovery of the species. For these reasons, designation of critical habitat would have few, if any, additional benefits beyond those that will result from continued consultation for the presence of the species.

Benefits of Exclusion—San Rafael Ranch Low-Effect Habitat Conservation Plan

A considerable benefit of excluding portions of the Santa Cruz River Subbasin Unit as northern Mexican gartersnake critical habitat is the maintenance and strengthening of ongoing conservation partnerships. As mentioned above, the San Rafael Ranch is an important land manager in southern Arizona. The San Rafael Ranch has

improved habitat by conservation-based grazing practices, which include grazing at sustainable levels, adding new water sources, and deferring grazing in riparian pastures from April to November each year. These practices have provided a net increase of wetted area and improved riparian and upland habitat, which provide more opportunity for aquatic species to expand or to be reintroduced. Maintaining and managing constructed ponds is of particular benefit to the northern Mexican gartersnake because these water sources become more drought-resistant and provide reliable habitat for primary prey species including Sonora tiger salamanders, various anurans, and native fish. In addition to managing and maintaining water sources, 21 water sources have been added, which improves livestock distribution and lessens impacts of grazing, as well as increases foraging opportunities for northern Mexican gartersnakes. The use of fencing around many dirt tanks has led to improved cover conditions that benefit the northern Mexican gartersnake. Lastly, the San Rafael Ranch low-effect HCP fosters the removal of nonnative aquatic predatory species, which is critical to the conservation and recovery of northern Mexican gartersnakes. These activities promote long-term protection and conserve the northern Mexican gartersnake and its habitat on the San Rafael Ranch.

Because important areas with northern Mexican gartersnake habitat occur on private lands, collaborative relationships with private landowners are important in recovering the species. The northern Mexican gartersnake and its habitat are expected to benefit from voluntary landowner management actions that implement appropriate and effective conservation strategies. Where consistent with the discretion provided by the Act, it is beneficial to implement policies that provide positive incentives to private landowners to voluntarily conserve natural resources and that remove or reduce disincentives to conservation (Wilcove *et al.* 1996, pp. 1–15; Bean 2002, pp. 1–7). Thus, it is important for northern Mexican gartersnake recovery to build on continued conservation activities such as these with a proven partner, and to provide positive

incentives for other private landowners who might be considering implementing voluntary conservation activities, but who have concerns about incurring incidental regulatory or economic impacts.

The benefits of excluding this area from critical habitat will encourage the continued conservation, land management, and coordination with the Service. If this area is designated as critical habitat, we may jeopardize future conservation and information sharing for the recovery of the northern Mexican gartersnake.

Benefits of Exclusion Outweigh the Benefits of Inclusion—San Rafael Ranch Low-Effect Habitat Conservation Plan

We have determined that the benefits of exclusion of the San Rafael Ranch, with the implementation of their low-effect HCP, outweigh the benefits of inclusion. In our determination, we considered and found that the HCP meets our criteria for exclusion for HCPs. As explained above, the private landowner is properly implementing the HCP and is expected to do so for the term of the 30-year agreement, the northern Mexican gartersnake is a covered species under the 30-year permit, and the HCP specifically addresses the habitat of the species and meets conservation needs of the species. The San Rafael Ranch is currently managing northern Mexican gartersnake habitat successfully and is committed to maintaining and enhancing habitats to benefit all native wildlife. The benefits of including the San Rafael Ranch in critical habitat are few, and are limited to educational benefits since these lands are privately owned and thus a trigger for section 7 consultation for adverse modification is lacking. The benefits of excluding this area from designation as critical habitat for the northern Mexican gartersnake are significant, and include encouraging the continuation of adaptive management measures such as monitoring, surveys, enhancement, and restoration activities that the San Rafael Ranch currently implements and plans for the future. The exclusion of this area will likely also provide additional benefits to the species by encouraging and maintaining a cooperative

working relationship with the San Rafael Ranch.

Through their efforts, the San Rafael Ranch has demonstrated a commitment to management practices that have conserved and benefited the northern Mexican gartersnake population in that area. In addition, the San Rafael Ranch had privately funded scientific research at the Ranch in order to develop data that have contributed to the understanding of habitat dynamics and their role in sustaining native wildlife. Considering the past and ongoing efforts of management to benefit the northern Mexican gartersnake, done in coordination and cooperation with the Service, we find the benefits of excluding portions of the San Rafael Ranch outweigh the benefits of including them in critical habitat.

Exclusion Will Not Result in Extinction of the Species— San Rafael Ranch Low-Effect Habitat Conservation Plan

We have determined that exclusion of areas of the San Rafael Ranch will not result in extinction of the northern Mexican gartersnake, nor hinder its recovery, because management will ensure the long-term persistence and protection of northern Mexican gartersnake habitat at the San Rafael Ranch and because the San Rafael Ranch is committed to greater conservation measures on their land than would be available through the designation of critical habitat. In addition, as discussed above under **Effects of Critical Habitat Designation, Section 7 Consultation**, if a Federal action or permitting occurs, the known presence of northern Mexican gartersnakes will require evaluation under the jeopardy standard of section 7 of the Act, even absent the designation of critical habitat, and thus will protect the species against extinction. Accordingly, we have determined that approximately 116 ac (47 ha) of land within the Santa Cruz River Subunit, Unnamed Drainage and Pasture 9 Tank Subunit, and Unnamed Drainage and Sheehy Spring Subunit owned by the San Rafael Ranch are excluded under section 4(b)(2) of the Act because the benefits of exclusion outweigh the benefits of

inclusion and will not cause the extinction of the species.

V. Verde River Subunit within the Verde River Subbasin Unit—Salt River Project Camp Verde Riparian Preserve (Roosevelt HCP)

Critical habitat for the northern Mexican gartersnake was identified within the Verde River Subbasin, including 96 ac (39 ha) of private lands owned by the Salt River Project (SRP) covered by the Service-approved Roosevelt HCP for the northern Mexican gartersnake, in areas where the species occurs. In the revised proposed critical habitat rule (85 FR 23608; April 28, 2020), we identified this area as one to be considered for exclusion. In response to the identification of the area as one to be considered for exclusion, permittees of the Roosevelt HCP requested that the critical habitat within the SRP Camp Verde Riparian Preserve (Preserve) be designated as critical habitat for the northern Mexican gartersnake. The commenters expressed that a designation of critical habitat on the Preserve would assist the public's understanding of the importance of year-round protection for the riparian habitat that supports the northern Mexican gartersnake population, as well as flycatchers and cuckoos that are present on the property.

Accordingly, we have determined not to consider this area for exclusion, and therefore no additional discretionary analysis regarding exclusion is warranted (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act: 81 FR 7226; February 11, 2016).

VI. Cienega Creek Subunit within the Cienega Creek Subbasin Unit—Pima County Cienega Creek Natural Preserve (Pima County Multi-Species Conservation Plan (MSCP))

Critical habitat for the northern Mexican gartersnake was identified within the Cienega Creek Subbasin, including 543 ac (220 ha) of private lands in areas where the species occurs. These private lands include lands owned by permittees of the Service-approved section 10 Pima County MSCP. In the revised proposed critical habitat rule (85

FR 23608; April 28, 2020), we identified approximately 12 mi (19 km) of Cienega Creek within 543 ac (220 ha) of the Cienega Creek Subunit of the Cienega Creek Subbasin Unit owned by Pima County Regional Flood Control District covered by the Pima County MSCP for the northern Mexican gartersnake.

Pima County commented on inclusion of this area stating that maintaining northern Mexican gartersnake critical habitat on lands managed by the Pima County Regional Flood Control District would not impact their section 10(a)(1)(B) permit or their partners. Because there would not be impacts to their 10(a)(1)(B) permit, the permittees in these lands requested that the critical habitat within the Cienega Creek Natural Area managed by Pima County Regional Flood Control District that falls within the Pima County MSCP planning area be designated as critical habitat and not be excluded. Accordingly, we have determined not to consider this area for exclusion, and therefore no additional discretionary analysis regarding exclusion is warranted (see Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act: 81 FR 7226; February 11, 2016).

Tribal Lands

Several Executive Orders, Secretarial Orders, and policies concern working with Tribes. These guidance documents generally confirm our trust responsibilities to Tribes, recognize that Tribes have sovereign authority to control Tribal lands, emphasize the importance of developing partnerships with Tribal governments, and direct the Service to consult with Tribes on a government-to-government basis. When we undertake a discretionary 4(b)(2) exclusion analysis, we will always consider exclusion of Tribal lands, and give great weight to Tribal concerns in analyzing the benefits of exclusion. However, Tribal concerns are not a factor in determining what areas, in the first instance, meet the definition of “critical habitat.”

A joint Secretarial Order that applies to both the Service and the National Marine

Fisheries Service (NMFS), Secretarial Order 3206, *American Indian Tribal Rights, Federal–Tribal Trust Responsibilities, and the Endangered Species Act* (June 5, 1997) (S.O. 3206), is the most comprehensive of the various guidance documents related to Tribal relationships and Act implementation, and it provides the most detail directly relevant to the designation of critical habitat. In addition to the general direction discussed above, S.O. 3206 explicitly recognizes the right of Tribes to participate fully in the listing process, including designation of critical habitat. The Order also states: “Critical habitat shall not be designated in such areas unless it is determined essential to conserve a listed species. In designating critical habitat, the Services shall evaluate and document the extent to which the conservation needs of the listed species can be achieved by limiting the designation to other lands.” In light of this instruction, when we undertake a discretionary section 4(b)(2) exclusion analysis, we will always consider exclusions of Tribal lands under section 4(b)(2) of the Act prior to finalizing a designation of critical habitat, and will give great weight to Tribal concerns in analyzing the benefits of exclusion (Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act, (81 FR 7226; February 11, 2016)).

However, S.O. 3206 does not preclude us from designating Tribal lands or waters as critical habitat, nor does it state that Tribal lands or waters cannot meet the Act’s definition of “critical habitat.” We are directed by the Act to identify areas that meet the definition of “critical habitat” (i.e., areas occupied at the time of listing that contain the essential PBFs that may require special management or protection and unoccupied areas that are essential to the conservation of a species), without regard to landownership. While S.O. 3206 provides important direction, it expressly states that it does not modify the Secretaries’ statutory authority. Our Policy on Exclusion similarly makes clear that while giving great weight to Tribal concerns, such concerns are not a factor in determining what areas, in the first instance, meet the definition of “critical habitat”.

Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act, (81 FR 7226; February 11, 2016).

Verde River Subunit—Yavapai-Apache Nation Tribal Lands Management

We identified 225 ac (91 ha) of northern Mexican gartersnake critical habitat that occurs on Yavapai-Apache Nation lands within portions of the Verde River Subunit. The governing body of the Yavapai-Apache Nation developed Resolution No. 46-2006, in 2006, entitled, “A Resolution Confirming and Declaring a Riparian Conservation Corridor and Management Plan for the Verde River.”

Prior to the incursion of non-Indians into their territory, the Yavapai-Apache Nation notes that their people lived and prospered for many centuries along the Verde River and its tributaries without depleting the river system or harming its riparian habitat and the many plant and animal species it supports (Montgomery & Interpreter, PLC 2020, p. 2). Today, the Yavapai-Apache Nation is only a small portion of lands considered as historical Yavapai-Apache Nation lands and currently totals a little over 1,800 ac (728 ha) in Arizona. The Verde River and its tributaries serve as a primary source of the Yavapai-Apache Nation’s water supply and is integral in the preservation of the Yavapai-Apache Nation’s values. The Yavapai-Apache Nation has implemented strong conservation measures on their lands to preserve the Verde River for the benefit of all species and to protect the practices of the Yavapai-Apache Nation. The Yavapai-Apache Nation is aware of the threats facing the Verde River and adjacent lands, the Yavapai-Apache Nation’s impacts on the riparian habitat and food availability, and the area’s suitability for the northern Mexican gartersnake and its habitat (Montgomery and Interpreter, PLC 2020).

The Yavapai-Apache Nation continues to preserve those portions of the Verde River under its jurisdiction along with the plants and animals associated with the river. The previously mentioned Tribal Resolution No. 46-2006 formally designates a

“Riparian Conservation Corridor” extending from the center of the river outward for 300 lateral ft (91 lateral m) on either side of the bank full stage of the Verde River (Yavapai-Apache Nation 2006, entire; Montgomery and Interpreter PLC, 2020, pp. 5–6). This resolution essentially codified in Tribal law certain land use restrictions and management goals for the Verde River that had long been in place on Yavapai-Apache Nation lands. Within the Riparian Conservation Corridor, those activities that are harmful to the health of the riparian area are discouraged or prohibited outright in order to protect the corridor’s natural habitat and the animal and plant species that depend on it, including the northern Mexican gartersnake. The Yavapai-Apache Nation has taken steps to protect northern Mexican gartersnake habitat along the Verde River through zoning, which implements Tribal ordinances and code requirements.

On May 25, 2005, the Yavapai-Apache Nation formally adopted a southwestern willow flycatcher management plan, which was subsequently amended and updated in 2012 to include conservation for the western yellow-billed cuckoo under Tribal resolution No. 156-12. The purpose of the Yavapai-Apache Nation’s southwestern willow flycatcher management plan is to promote the PBFs that will maintain southwestern willow flycatcher and western yellow-billed cuckoo habitat. The strategy of the plan is not to allow any net loss or permanent impacts to riparian habitat by implementing measures from the Service’s southwestern willow flycatcher recovery plan (Service 2002, entire). Recreation and access to riparian areas will be managed to ensure no net loss of habitat. Fire within riparian areas will be suppressed and vegetation managed by reducing fire risks.

Since 2005, the Yavapai-Apache Nation has concluded that through implementation of their plan, there has been no net loss of riparian habitat. Since 2005, no cattle grazing has occurred within the Verde River corridor. If any future grazing is permitted, it will be conducted appropriately with fences, and in a manner to protect

riparian habitat quality. The Yavapai-Apache Nation has also installed measurement devices to evaluate the depth of the Verde River groundwater in order to address river flows necessary to maintain or improve the riparian habitat quality (Montgomery and Interpreter PLC, 2020, p. 8). Also, no new access roads or recreation sites have been created. Similarly, any new housing areas have been directed to avoid construction within the river corridor.

The Yavapai-Apache Nation has conducted continued education, information gathering, and partnering, and has emphasized the importance of protecting the Verde River within Tribal youth education programs. The Yavapai-Apache Nation has also continued to strengthen its partnership with the Service by meeting and coordinating efforts on the Service's goals for conservation on the Verde River. The Yavapai-Apache Nation has committed to cooperatively discussing and examining future projects with the Service that could impact the northern Mexican gartersnake or its habitat.

Benefits of Inclusion—Yavapai-Apache Nation Tribal Lands Management

As discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat. A critical habitat designation requires Federal agencies to consult on whether their activity would destroy or adversely modify critical habitat to the point where recovery could not be achieved.

Because the species occurs in the area, the benefits of a critical habitat designation are reduced to the possible incremental benefit of critical habitat because the designation would not be the sole catalyst for initiating section 7 consultation. However, should a

catastrophic event such as disease, drought, wildfire, chemical spill, etc., result in potential or statistically proven, actual extirpation of the gartersnake population in this area, designation of critical habitat would ensure future Federal actions do not result in adverse modification of critical habitat, allowing for future recovery actions to occur.

We have conducted informal consultations with agencies implementing actions on Tribal lands and provided technical assistance on project implementation to Tribes, and the Corps has coordinated with Tribes and pueblos on projects within the area. However, overall formal section 7 consultations have been rare on Tribal lands. Because of how Tribes and pueblos have chosen to manage and conserve their lands and the lack of past section 7 consultation history, we do not anticipate a noticeable increase in section 7 consultations in the future, nor that such consultations would significantly change the current management of the northern Mexican gartersnake or its habitat. Therefore, the effect of a critical habitat designation on these lands is minimized.

Were we to designate critical habitat on these Tribal lands, our section 7 consultation history indicates that there may be some, but few, regulatory benefits to the northern Mexican gartersnake. As described above, even with northern Mexican gartersnakes occurring on these Tribal lands, the frequency of formal section 7 consultations has been rare. Projects initiated by Federal agencies in the past were associated with maintenance of rights-of-way or water management such as those initiated by Federal Highway Administration or Reclamation. When we review projects addressing the northern Mexican gartersnake pursuant to section 7 of the Act in Arizona, we examine conservation measures associated with the project for their value in the conservation of northern Mexican gartersnakes or their habitat. Where there is consistency with managing habitat and implementing suitable conservation measures, it would be unlikely that a consultation would result in a determination of adverse modification of critical habitat. Therefore, when the threshold for adverse modification is

not reached, only additional conservation recommendations could result from a section 7 consultation, but such measures would be discretionary on the part of the Federal agency.

Another important benefit of including lands in a critical habitat designation is that the designation can serve to inform and educate landowners and the public regarding the potential conservation value of an area, and may help focus management efforts on areas of high value for certain species. Any information about the northern Mexican gartersnake that reaches a wide audience, including parties engaged in conservation activities, is valuable. The Yavapai-Apache Nation is fully aware of the importance of riparian habitat and conservation. Given that regulatory actions have already informed the public about the value of these areas and helped to focus potential conservation actions, the educational benefits from designating critical habitat would be small.

Another possible benefit of the designation of critical habitat is that it may also affect the implementation of Federal laws, such as the Clean Water Act. These laws require analysis of the potential for proposed projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

Finally, there is the possible benefit that additional funding could be generated for habitat improvement by an area being designated as critical habitat. Some funding sources may rank a project higher if the area is designated as critical habitat. Tribes or pueblos often seek additional sources of funding in order to conduct wildlife-related conservation activities. Therefore, having an area designated as critical habitat could improve the chances of receiving funding for habitat-related conservation projects. However, areas where northern Mexican gartersnakes occur, as is the case here, may also provide benefits when projects are evaluated for receipt of funding.

Therefore, because of the development and implementation of a management plan, ongoing habitat conservation, the rare initiation of formal section 7 consultations,

the occurrence of northern Mexican gartersnakes on Tribal lands, and the Service's coordination with Tribes on northern Mexican gartersnake-related issues, it is expected that there may be some, but limited, benefits from including these Tribal lands in a northern Mexican gartersnake critical habitat designation. The principal benefit of any designated critical habitat is that activities in and affecting such habitat require consultation under section 7 of the Act. Such consultation would ensure that adequate protection is provided to avoid destruction or adverse modification of critical habitat.

Benefits of Exclusion—Yavapai-Apache Nation Tribal Lands Management

The benefits of excluding Yavapai-Apache Nation lands from designated critical habitat include: (1) Our deference to the Tribe to develop and implement conservation and natural resource management plans for their lands and resources, which includes benefits to the northern Mexican gartersnake and its habitat that might not otherwise occur; (2) the continuance and strengthening of our effective working relationships with the Tribe to promote the conservation of the northern Mexican gartersnake and its habitat; and (3) the maintenance of effective partnerships with the Tribe and working in collaboration and cooperation to promote additional conservation of the northern Mexican gartersnake and its habitat.

During this rulemaking process, we have communicated with the Yavapai-Apache Nation to discuss how they might be affected by the regulations associated with listing and designating critical habitat for the northern Mexican gartersnake. As such, we have established a beneficial relationship to support northern Mexican gartersnake conservation. As part of our relationship, we have provided technical assistance to the Yavapai-Apache Nation to develop measures to conserve the northern Mexican gartersnake and its habitat on their lands. These measures are contained within the management plan developed by the Nation. We have determined that the Yavapai-Apache Nation should be the governmental entity to manage and promote northern

Mexican gartersnake conservation on the Yavapai-Apache Nation's lands. During our coordination efforts with the Yavapai-Apache Nation, we recognized and endorsed their fundamental right to provide for Tribal resource management activities, including those relating to riparian habitat.

As stated above, the Yavapai-Apache Nation has developed and implemented a management plan specific to needs of riparian habitat on their lands. The Yavapai-Apache Nation has expressed that their lands, and specifically riparian habitat, are connected to their cultural and religious beliefs, and as a result they have a strong commitment and reverence toward its stewardship and conservation, and have common goals with the Service on species and habitat conservation. The management plan identifies actions to maintain, improve, and preserve riparian habitat. The Yavapai-Apache Nation has also implemented a review process for activities occurring in riparian zones; restricted or limited certain actions that would impact resources; and implemented conservation measures to minimize, or eliminate, adverse impacts. Overall, the commitments toward management of northern Mexican gartersnake habitat by the Yavapai-Apache Nation likely accomplish greater conservation than would be available through a designation of critical habitat.

The designation of critical habitat on Yavapai-Apache Nation lands would be expected to have an adverse impact on our working relationship with them. The designation of critical habitat would be viewed as an intrusion and impact their sovereign abilities to manage natural resources in accordance with their own policies, customs, and laws. These impacts include, but are not limited to: (1) limiting the Yavapai-Apache Nation's ability to protect and control its own resources on its lands; (2) undermining the positive and effective government-to-government relationship between the Yavapai-Apache Nation and the Service—a relationship that serves to protect federally listed species and their habitat; and (3) hampering or confusing the Yavapai-Apache Nation's

own long-standing protections for the Verde River and its habitat. The perceived restrictions of a critical habitat designation could have a damaging effect on coordination efforts, possibly preventing actions that might maintain, improve, or restore habitat for the northern Mexican gartersnake and other species. For these reasons, we have determined that our working relationships with the Yavapai-Apache Nation would be better maintained if we excluded their lands from the designation of northern Mexican gartersnake critical habitat. We view this as a substantial benefit since we have developed a cooperative working relationship with the Yavapai-Apache Nation for the mutual benefit of the northern Mexican gartersnake and other endangered and threatened species.

In addition, we anticipate future management plans to include additional conservation efforts for other listed species and their habitats may be hampered if critical habitat is designated on Tribal lands being managed for sensitive species conservation. We have determined that many other Tribes and pueblos are willing to work cooperatively with us and others to benefit other listed and sensitive species, but only if they view the relationship as mutually beneficial. Consequently, the development of future voluntary management actions for other listed species may be compromised if these Tribal lands are designated as critical habitat for the northern Mexican gartersnake. Thus, a benefit of excluding these lands would be future conservation efforts that would benefit other listed or sensitive species.

Benefits of Exclusion Outweigh the Benefits of Inclusion—Yavapai-Apache Nation Tribal Lands Management

The benefits of including Yavapai-Apache Nation Tribal lands in the critical habitat designation are limited to the incremental benefits gained through the regulatory requirement to consult under section 7, the consideration of the need to avoid adverse modification of critical habitat, and interagency and educational awareness. However, due to the rarity of Federal actions resulting in formal section 7 consultations, the benefits

of a critical habitat designation are minimized. In addition, the benefits of consultation are further minimized because any conservation measures that may have resulted from consultation are already provided through the conservation benefits to the northern Mexican gartersnake and their habitat from implementation of the Yavapai-Apache Nation's management plan and Tribal Resolution No. 46-2006.

Because the Yavapai-Apache Nation has developed a riparian habitat management plan, has been involved with the critical habitat designation process, and is aware of the value of their lands for northern Mexican gartersnake conservation, the educational benefits of a northern Mexican gartersnake critical habitat designation are also minimized.

Allowing the Yavapai-Apache Nation to implement its own resource conservation programs gives the Yavapai-Apache Nation the opportunity to manage their natural resources to benefit riparian habitat for the northern Mexican gartersnake, without the perception of Federal Government intrusion. This philosophy is also consistent with our published policies on Native American natural resource management. The exclusion of these areas will likely also provide additional benefits to the northern Mexican gartersnake and other listed species that would not otherwise be available without the Service's maintaining a cooperative working relationship with the Yavapai-Apache Nation. The actions taken by the Yavapai-Apache Nation to manage and protect habitat needed for northern Mexican gartersnake exceed those conservation measures which may be required if the area were designated as critical habitat. As a result, we have determined that the benefits of excluding these Tribal lands from critical habitat designation outweigh the benefits of including these areas.

Exclusion Will Not Result in Extinction—Yavapai-Apache Nation Tribal Lands Management

We have determined that exclusion of Yavapai-Apache Nation lands from the

critical habitat designation will not result in the extinction of the northern Mexican gartersnake. We base this determination on several points. First, as discussed above under **Effects of Critical Habitat Designation**, *Section 7 Consultation*, if a Federal action or permitting occurs, the known presence of northern Mexican gartersnakes would require evaluation under the jeopardy standard of section 7 of the Act, even absent the designation of critical habitat, and thus will protect the species against extinction. Second, the Yavapai-Apache Nation has a long-term record of conserving species and habitat, and is committed to protecting and managing northern Mexican gartersnake habitat according to their cultural history, management plans, and natural resource management objectives. We have determined that this commitment accomplishes greater conservation than would be available through a designation of critical habitat. With the implementation of these conservation measures, based upon strategies developed in the management plan, we have concluded that this exclusion from critical habitat will not result in the extinction of the northern Mexican gartersnake. Accordingly, we have determined that the benefits of excluding the Yavapai-Apache Nation lands outweigh the benefits of their inclusion, and the exclusion of these lands from the designation will not result in the extinction of the species. As a result, we are excluding 225 ac (91 ha) of Yavapai-Apache Nation lands within the Verde River Subunit from this final designation.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for

achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5

million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical small business firm’s business operations.

Under the RFA, as amended, and as understood in the light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. There is no requirement under the RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities will be directly regulated by this rulemaking, the Service certifies that this critical habitat designation will not have a significant economic impact on a substantial number of small entities.

During the development of this final rule, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based

on this information, we affirm our certification that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. In our economic analysis, we did not find that this critical habitat designation will significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following finding:

(1) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or Tribal governments “lack authority” to adjust

accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act does not apply, nor does critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule will significantly or uniquely affect small governments because the lands designated as critical habitat are owned by Pima County, private landowners, Tribes, the States of New Mexico and Arizona, and the Federal Government (U.S. Forest Service, National Park Service, Bureau of Land Management, and U.S. Fish and Wildlife Service). In addition, based in part on an analysis conducted for the proposed designation of critical habitat and extrapolated to this designation, we do

not expect this rule to significantly or uniquely affect small governments. Small governments will be affected only to the extent that any programs or actions requiring or using Federal funds, permits, or other authorized activities must ensure that their actions will not adversely affect the critical habitat. Further, we do not believe that this rule will significantly or uniquely affect small governments because it will not produce a Federal mandate of \$100 million or greater in any year, that is, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. Therefore, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the northern Mexican gartersnake in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures, or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed and concludes this designation of critical habitat for the northern Mexican gartersnake does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this critical habitat designation with, appropriate State resource agencies. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the final rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The final designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical or biological features of the habitat necessary for the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist State and local governments in long-range planning because they no longer have to wait for case-by-case section 7 consultations to occur.

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule will not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, this rule identifies the elements of physical or biological features essential to the conservation of the northern Mexican gartersnake. The designated areas of critical habitat are presented on maps, and the rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) is not required. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)). However, when the range of the species includes States within the Tenth Circuit, such as that of the northern Mexican gartersnake, under the Tenth Circuit ruling in *Catron County Board of*

Commissioners v. U.S. Fish and Wildlife Service, 75 F.3d 1429 (10th Cir. 1996), we undertake a NEPA analysis for critical habitat designation.

We invited the public to comment on the extent to which the proposed critical habitat designation may have a significant impact on the human environment, or fall within one of the categorical exclusions for actions that have no individual or cumulative effect on the quality of the human environment. We received five comments during the comment period for the environmental assessment. Our environmental assessment found that the impacts of the revised proposed critical habitat designation would be minor and not rise to a significant level, so preparation of an environmental impact statement is not required. Copies of our final environmental assessment and Finding of No Significant Impact can be obtained by contacting the Field Supervisor of the Arizona Ecological Services Field Office, or on the Arizona Ecological Services Field Office website at <https://www.fws.gov/southwest/es/arizona/> (see **ADDRESSES**).

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We directly contacted the Yavapai-Apache Nation during the rulemaking process. We will continue to work on a

government-to-government basis with Tribal entities on conservation of habitat for the northern Mexican gartersnake.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at <http://www.regulations.gov> and upon request from the Arizona Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this final rule are the staff members of the Fish and Wildlife Service's Species Assessment Team and the Arizona Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

2. Amend § 17.11(h), the List of Endangered and Threatened Wildlife, by revising the entry for “Gartersnake, northern Mexican” under REPTILES to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
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* * * * *						
REPTILES						
* * * * *						
Gartersnake, northern Mexican	<i>Thamnophis eques megalops</i>	Wherever found	T	79 FR 38678, 7/8/2014; 50 CFR 17.42(g); ^{4d} 50 CFR 17.95(c). ^{CH}		
* * * * *						

3. Amend § 17.95(c) by adding an entry for “Northern Mexican Gartersnake (*Thamnophis eques megalops*)” after the entry for “American Crocodile (*Crocodylus acutus*)” to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(c) *Reptiles.*

* * * * *

Northern Mexican Gartersnake (*Thamnophis eques megalops*)

(1) Critical habitat units are depicted for La Paz, Mohave, Yavapai, Gila, Cochise, Santa Cruz, and Pima Counties in Arizona, and in Grant County in New Mexico, on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of northern Mexican gartersnake consist of the following components:

(i) Perennial or spatially intermittent streams that provide both aquatic and terrestrial habitat that allows for immigration, emigration, and maintenance of population connectivity of northern Mexican gartersnakes and contain:

(A) Slow-moving water (walking speed) with in-stream pools, off-channel pools, and backwater habitat;

(B) Organic and natural inorganic structural features (e.g., boulders, dense aquatic and wetland vegetation, leaf litter, logs, and debris jams) within the stream channel for thermoregulation, shelter, foraging opportunities, and protection from predators;

(C) Terrestrial habitat adjacent to the stream channel that includes riparian vegetation, small mammal burrows, boulder fields, rock crevices, and downed woody debris for thermoregulation, shelter, foraging opportunities, brumation, and protection from predators; and

(D) Water quality that meets or exceeds applicable State surface water quality standards.

(ii) Hydrologic processes that maintain aquatic and terrestrial habitat through:

(A) A natural flow regime that allows for periodic flooding, or if flows are modified or regulated, a flow regime that allows for the movement of water, sediment, nutrients, and debris through the stream network; and

(B) Physical hydrologic and geomorphic connection between a stream channel and its adjacent riparian areas.

(iii) A combination of amphibians, fishes, small mammals, lizards, and invertebrate species such that prey availability occurs across seasons and years.

(iv) An absence of nonnative fish species of the families Centrarchidae and Ictaluridae, American bullfrogs (*Lithobates catesbeianus*), and/or crayfish (*Orconectes virilis*, *Procambarus clarki*, etc.), or occurrence of these nonnative species at low enough levels such that recruitment of northern Mexican gartersnakes is not inhibited and maintenance of viable prey populations is still occurring.

(v) Elevations from 130 to 8,497 feet (40 to 2,590 meters).

(vi) Lentic wetlands including off-channel springs, cienegas, and natural and constructed ponds (small earthen impoundment) with:

(A) Organic and natural inorganic structural features (e.g., boulders, dense aquatic and wetland vegetation, leaf litter, logs, and debris jams) within the ordinary high water mark for thermoregulation, shelter, foraging opportunities, brumation, and protection from predators;

(B) Riparian habitat adjacent to ordinary high water mark that includes riparian vegetation, small mammal burrows, boulder fields, rock crevices, and downed woody debris for thermoregulation, shelter, foraging opportunities, and protection from predators; and

(C) Water quality that meets or exceeds applicable State surface water quality standards.

(vii) Ephemeral channels that connect perennial or spatially intermittent perennial streams to lentic wetlands in southern Arizona where water resources are limited.

(3) Critical habitat does not include humanmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

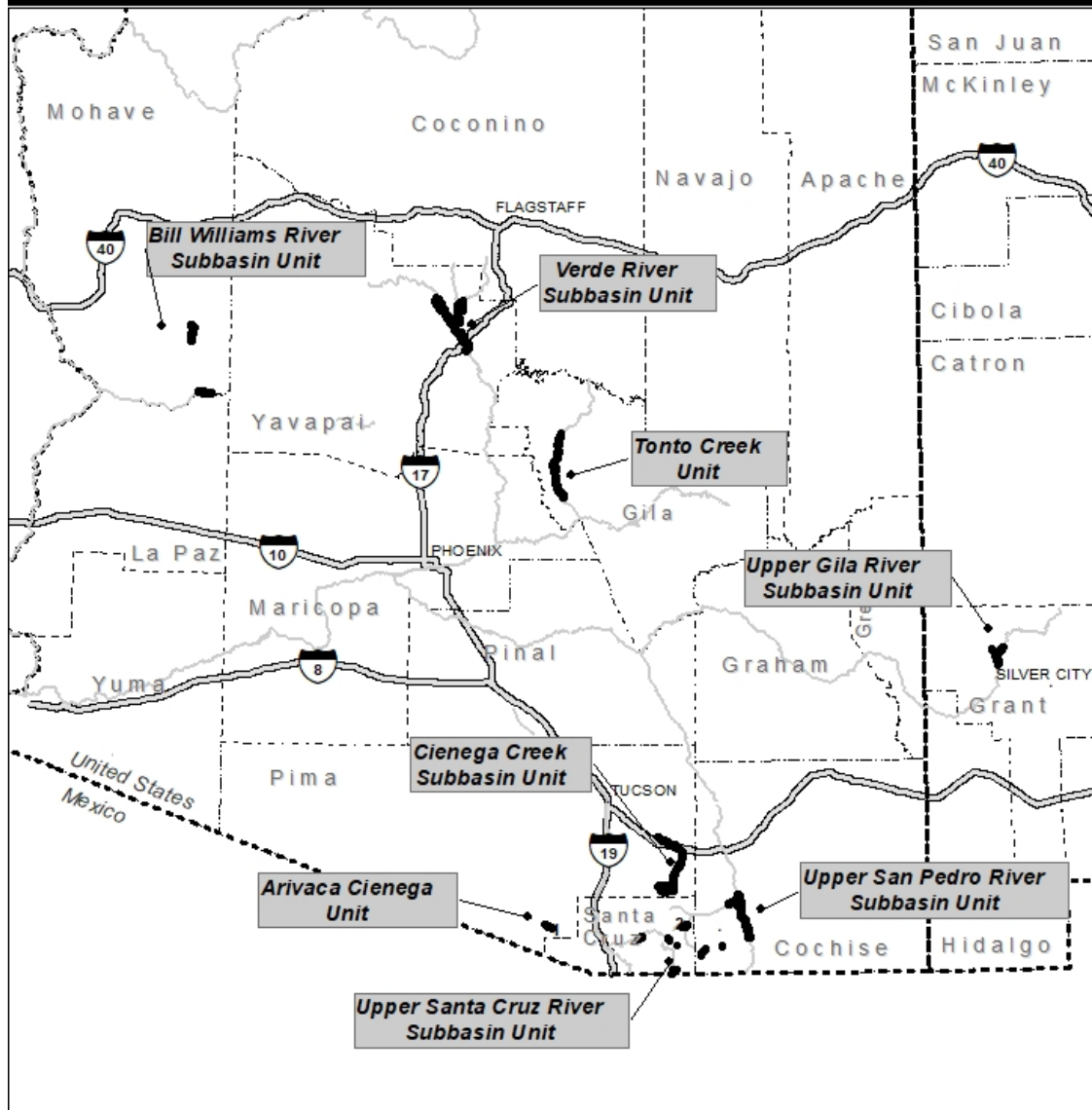
(4) Data layers defining map units were created included using the U.S. Geological Survey's 7.5' quadrangles, National Hydrography Dataset, and National Elevation Dataset; the Service's National Wetlands Inventory dataset; and aerial imagery from Google Earth Pro. Line locations for lotic streams (flowing water) and drainages are depicted as the "Flowline" feature class from the National Hydrography Dataset geodatabase. Point locations for lentic sites (ponds) are depicted as "NHDPPoint" feature class from the National Hydrography Dataset geodatabase. Extent of riparian habitat surrounding lotic streams and lentic sites is depicted by the greater of the "Wetlands" and "Riparian" features classes of the Service's national Wetlands Inventory dataset and further refined using aerial imagery from Google Earth Pro. Elevation range is masked using the "Elev_Contour" feature class of the National Elevation Dataset. Administrative boundaries for Arizona and New Mexico were obtained from the Arizona Land Resource Information Service and New Mexico Resource Geographic Information System, respectively. This includes the most current (as of [INSERT DATE 30 DAYS AFTER

DATE OF PUBLICATION IN THE FEDERAL REGISTER]) geospatial data available for land ownership, counties, States, and streets. Locations depicting critical habitat are expressed as decimal degree latitude and longitude in the World Geographic Coordinate System projection using the 1984 datum (WGS84). The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's Internet site at

<http://www.fws.gov/southwest/es/arizona/>, at *<http://www.regulations.gov>* at Docket No. FWS–R2–ES–2020–0011, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Note: Index map follows:

Northern Mexican Gartersnake Critical Habitat Index Map



Area Enlarged

-  Critical Habitat
-  Stream
-  County Boundary
-  State Boundary
-  Interstate Highway

0 30 60 90 Miles

0 30 60 90 Km

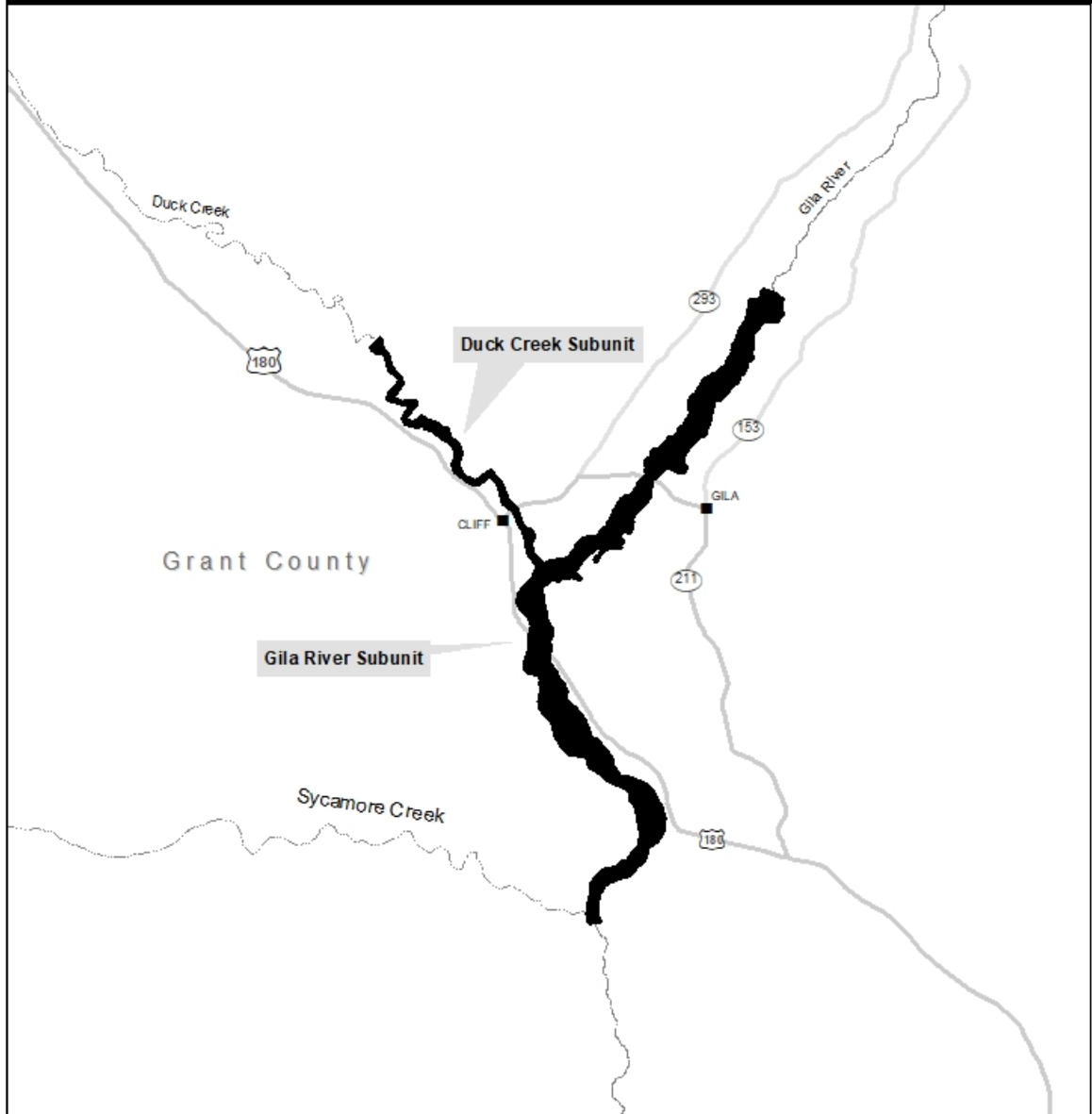


(6) Unit 1: Upper Gila River Subbasin Unit, Grant County, New Mexico.

(i) *General description*: Unit 1 consists of 1,133 acres (ac) (458 hectares (ha)) in Grant County, and is composed of lands in State (22 ac (9 ha)) and private (1,110 ac (449 ha)) ownership in two subunits near the towns of Cliff and Gila.

(ii) *Map*: Map of Unit 1 follows:

Northern Mexican Gartersnake Critical Habitat Upper Gila River Subbasin Unit



Area Enlarged

- Critical Habitat
- Stream
- Highway
- County Boundary

0 0.5 1 1.5 Miles

0 0.5 1 1.5 Km

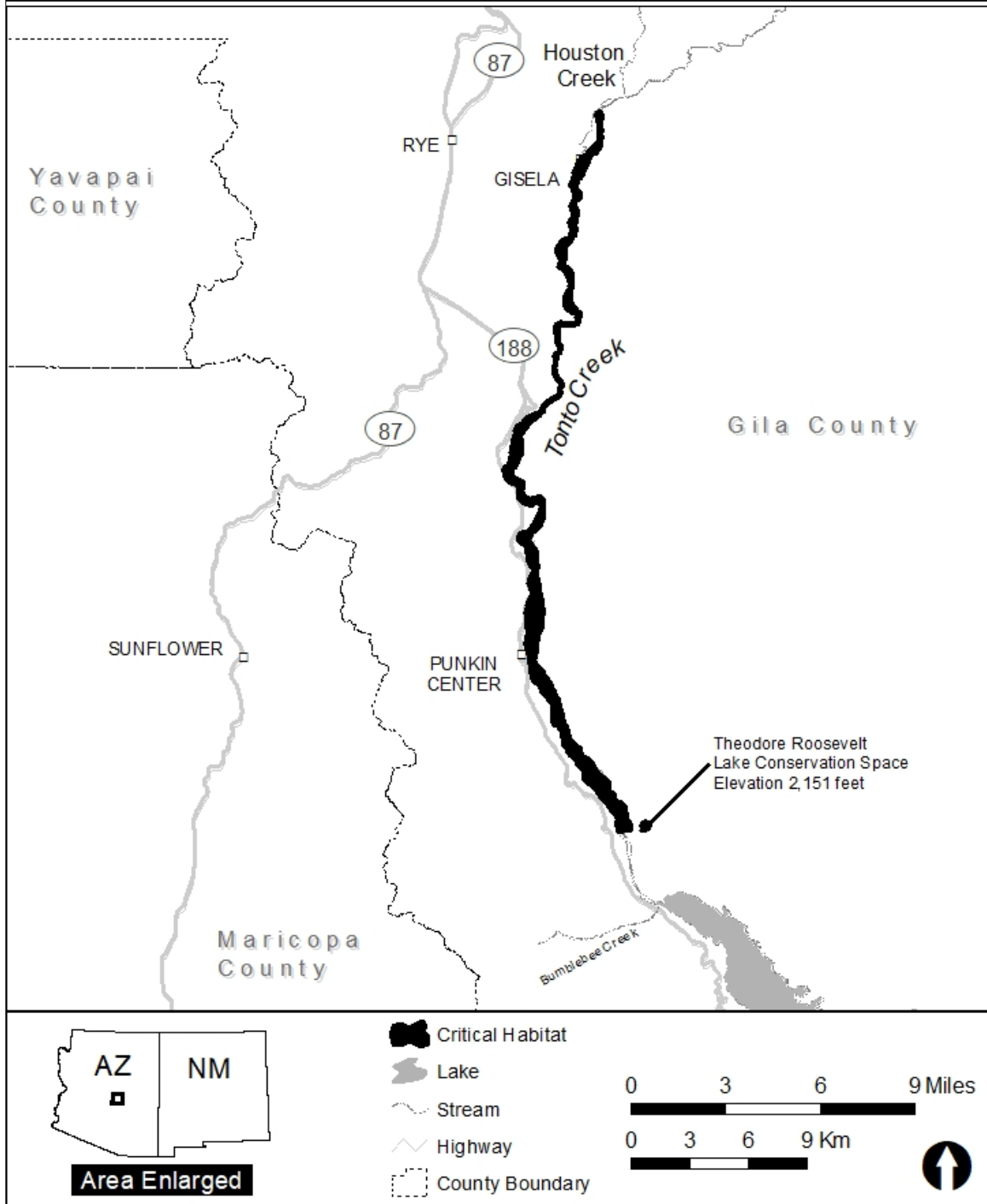


(7) Unit 2: Tonto Creek Unit, Gila County, Arizona.

(i) *General description:* Unit 2 consists of 3,176 ac (1,285 ha) in Gila County, and is composed of lands in Federal (2,230 ac (902 ha)) and private (947 ac (383 ha)) ownership near the towns of Gisela and Punkin Center.

(ii) *Map:* Map of Unit 2 follows:

Northern Mexican Gartersnake Critical Habitat Tonto Creek Unit

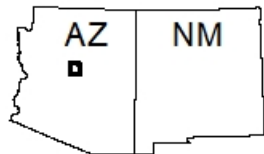
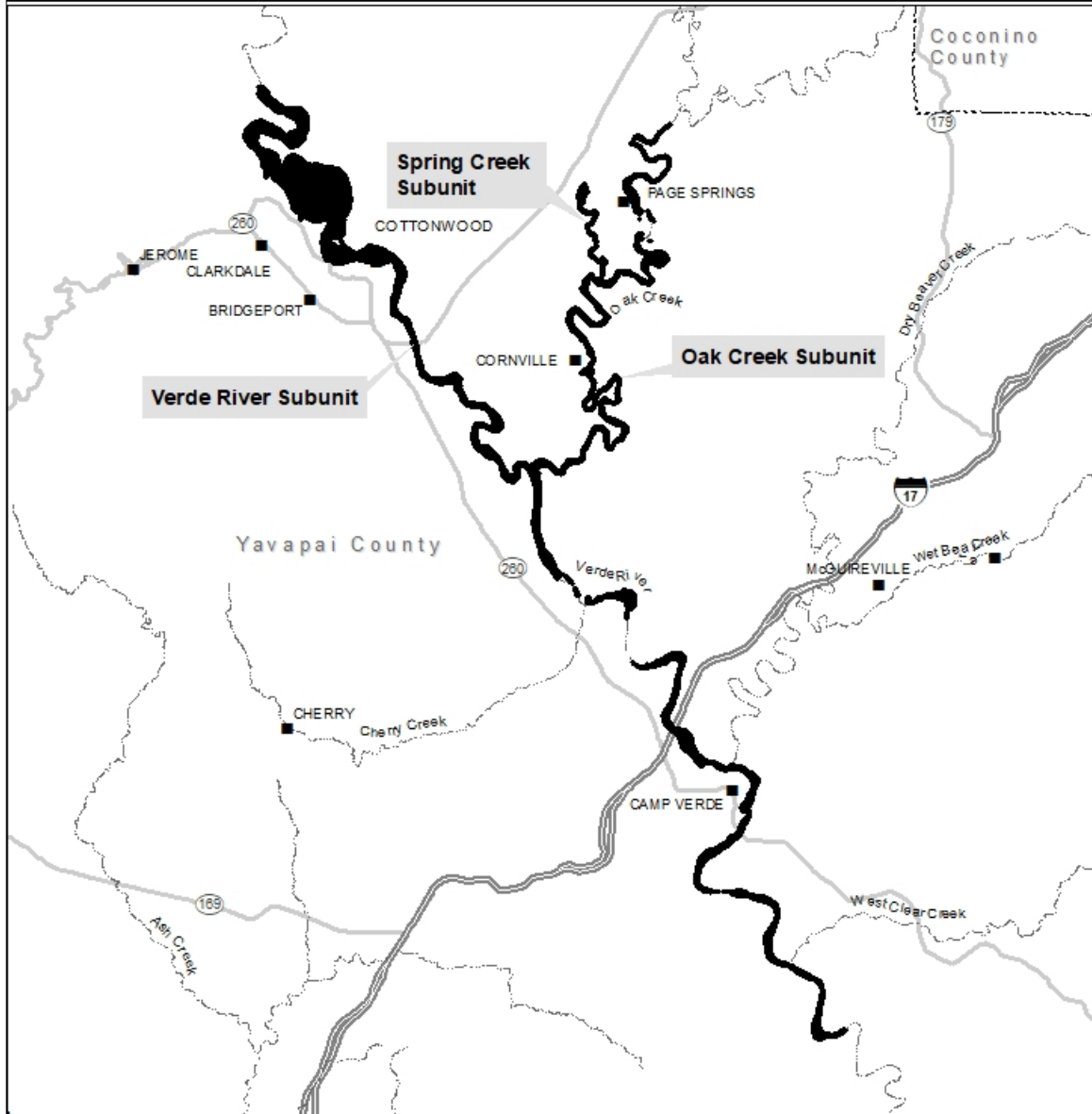


(8) Unit 3: Verde River Subbasin Unit, Yavapai County, Arizona.

(i) *General description:* Unit 3 consists of 5,265 ac (2,131 ha) in Yavapai County, and is composed of lands in Federal (978 ac (396 ha)), State (571 ac (231 ha)), and private (3,715 ac (1,433 ha)) ownership in three subunits near the towns of Cottonwood, Cornville, Page Springs, and Camp Verde.

(ii) *Map:* Map of Unit 3 follows:

Northern Mexican Gartersnake Critical Habitat Verde River Subbasin Unit



Area Enlarged

- Critical Habitat
- Stream
- Highway
- County Boundary

0 2 4 6 Miles

0 2 4 6 Km

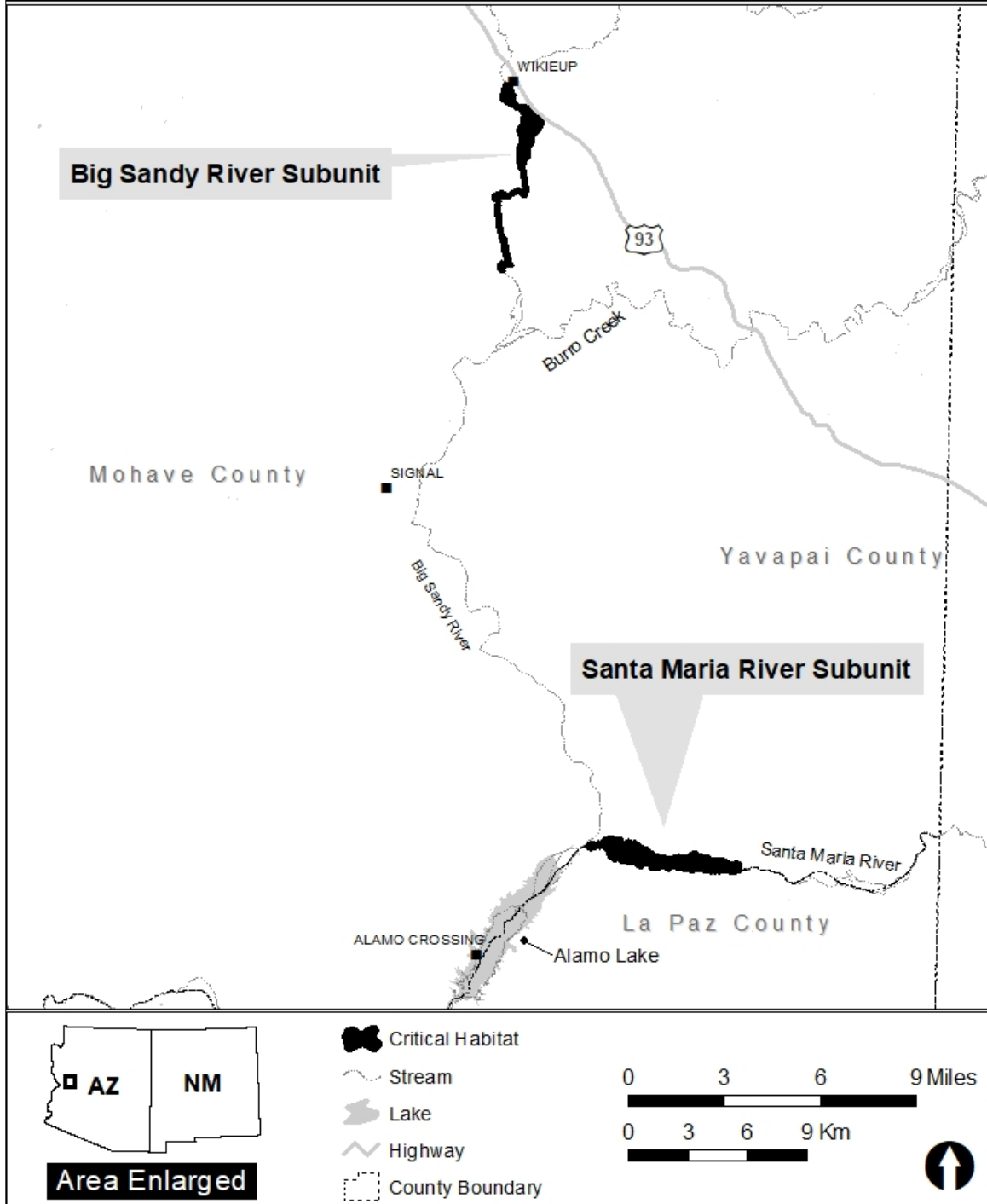


(9) Unit 4: Bill Williams River Subbasin Unit, La Paz and Mohave Counties, Arizona.

(i) *General description:* Unit 4 consists of 2,245 ac (908 ha) in La Paz and Mohave Counties, and is composed of lands in Federal (1,119 ac (453 ha)) and private (1,126 ac (456 ha)) ownership in two subunits near the towns of Wikiup and Signal.

(ii) *Map:* Map of Unit 4 follows:

Northern Mexican Gartersnake Critical Habitat Bill Williams River Subbasin Unit

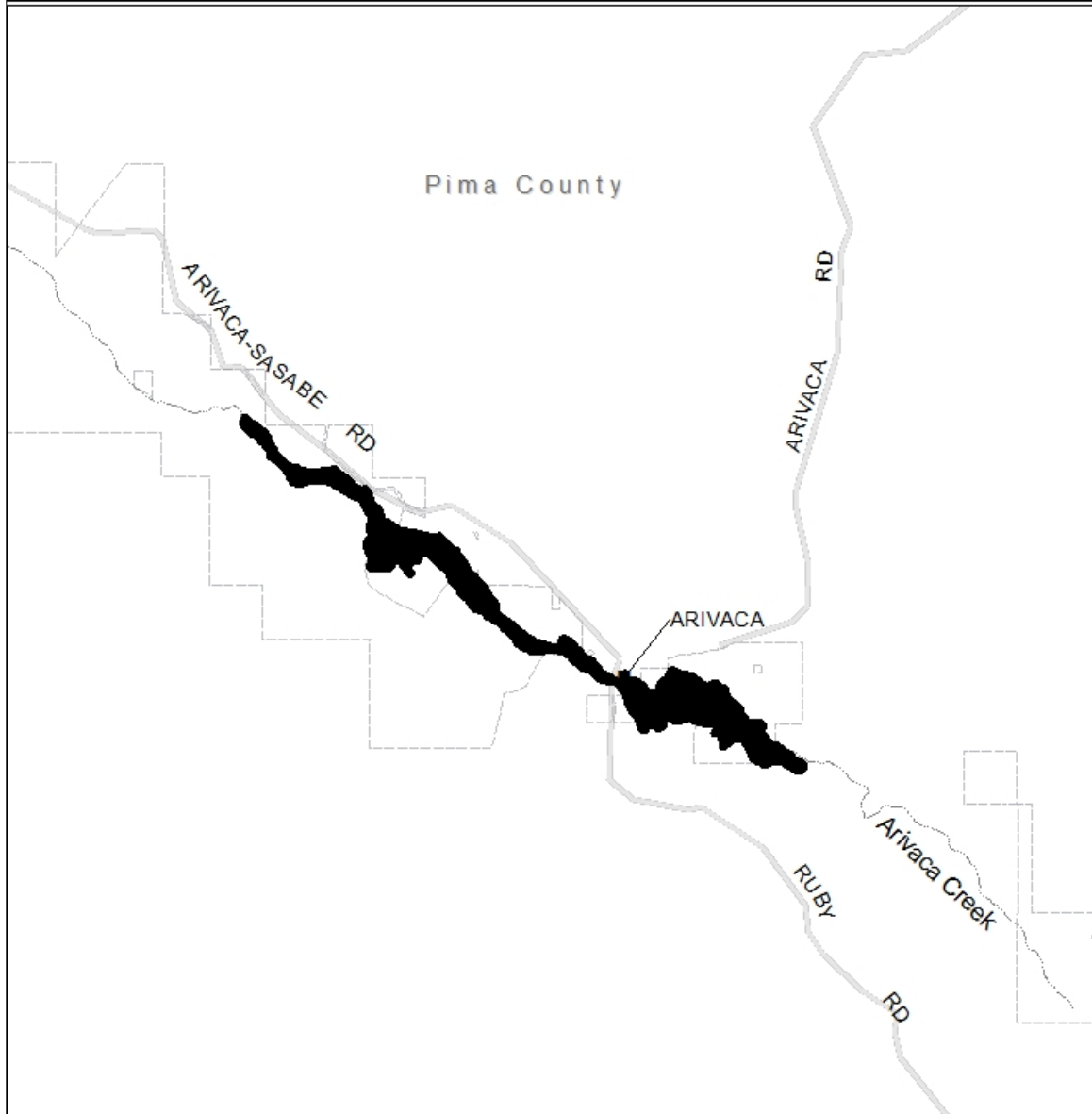


(10) Unit 5: Arivaca Cienega Unit, Pima County, Arizona.


(i) *General description:* Unit 5 consists of 211 ac (86 ha) in Pima County and is composed of lands in Federal (149 ac (60 ha)), State (1 ac (<1 ha)), and private (62 ac (25 ha)) ownership near the town of Arivaca.


(ii) *Map:* Map of Unit 5 follows:

Northern Mexican Gartersnake Critical Habitat Arivaca Cienega




Area Enlarged

 Critical Habitat

 Stream

 Buenos Aires NWR Boundary

 County Boundary

0 0.4 0.8 1.2 Miles

0 0.4 0.8 1.2 Km

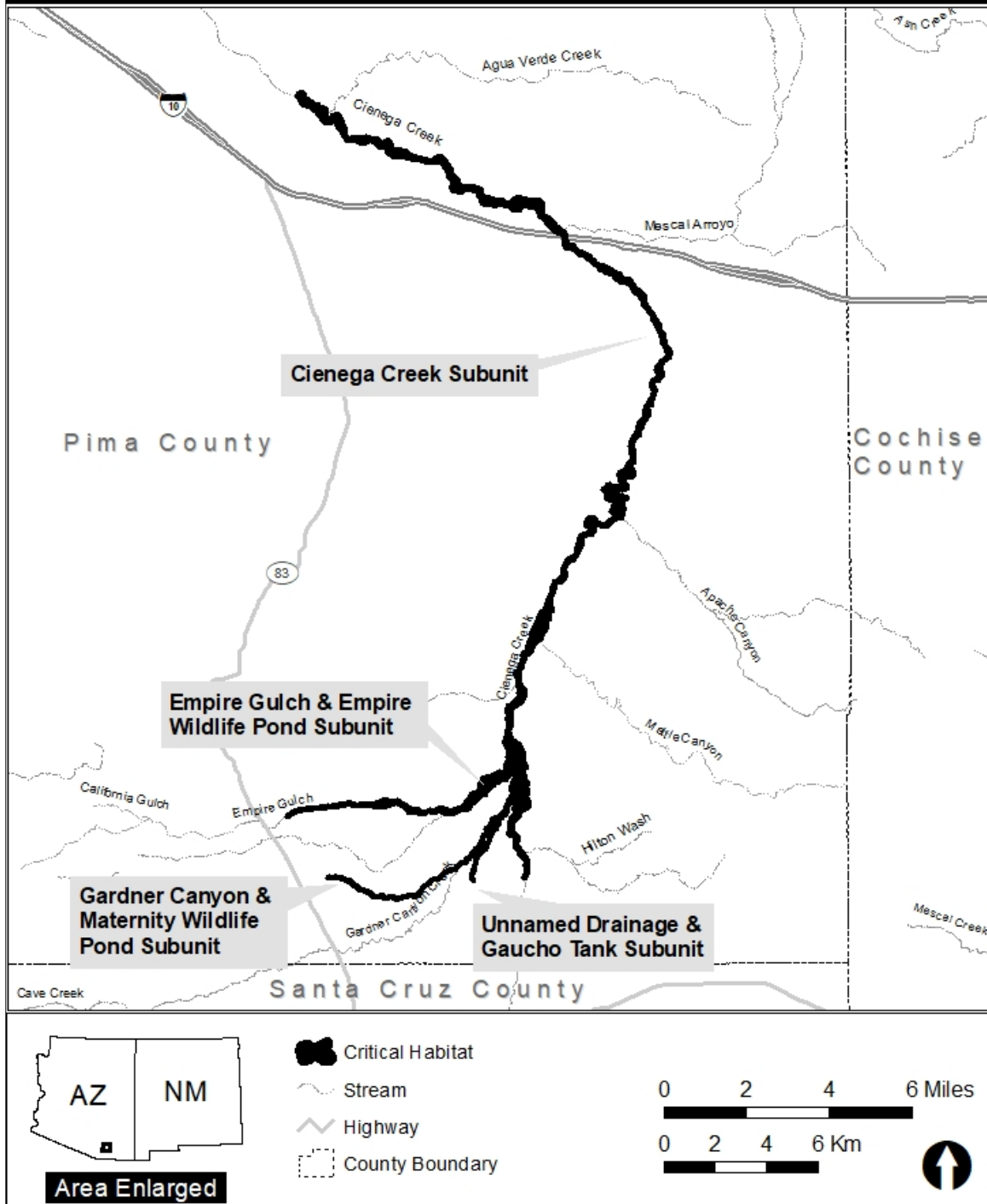


(11) Unit 6: Cienega Creek Subbasin Unit, Pima County, Arizona.

(i) *General description:* Unit 6 consists of 2,083 ac (843 ha) in Pima County and is composed of lands in Federal (1,113 ac (450 ha)), State (366 ac (148 ha)), and private (605 ac (245 ha)) ownership in four subunits near the towns of Tucson, Vail, and Sonoita.

(ii) *Map:* Map of Unit 6 follows:

Northern Mexican Gartersnake Critical Habitat Cienega Creek Subbasin Unit

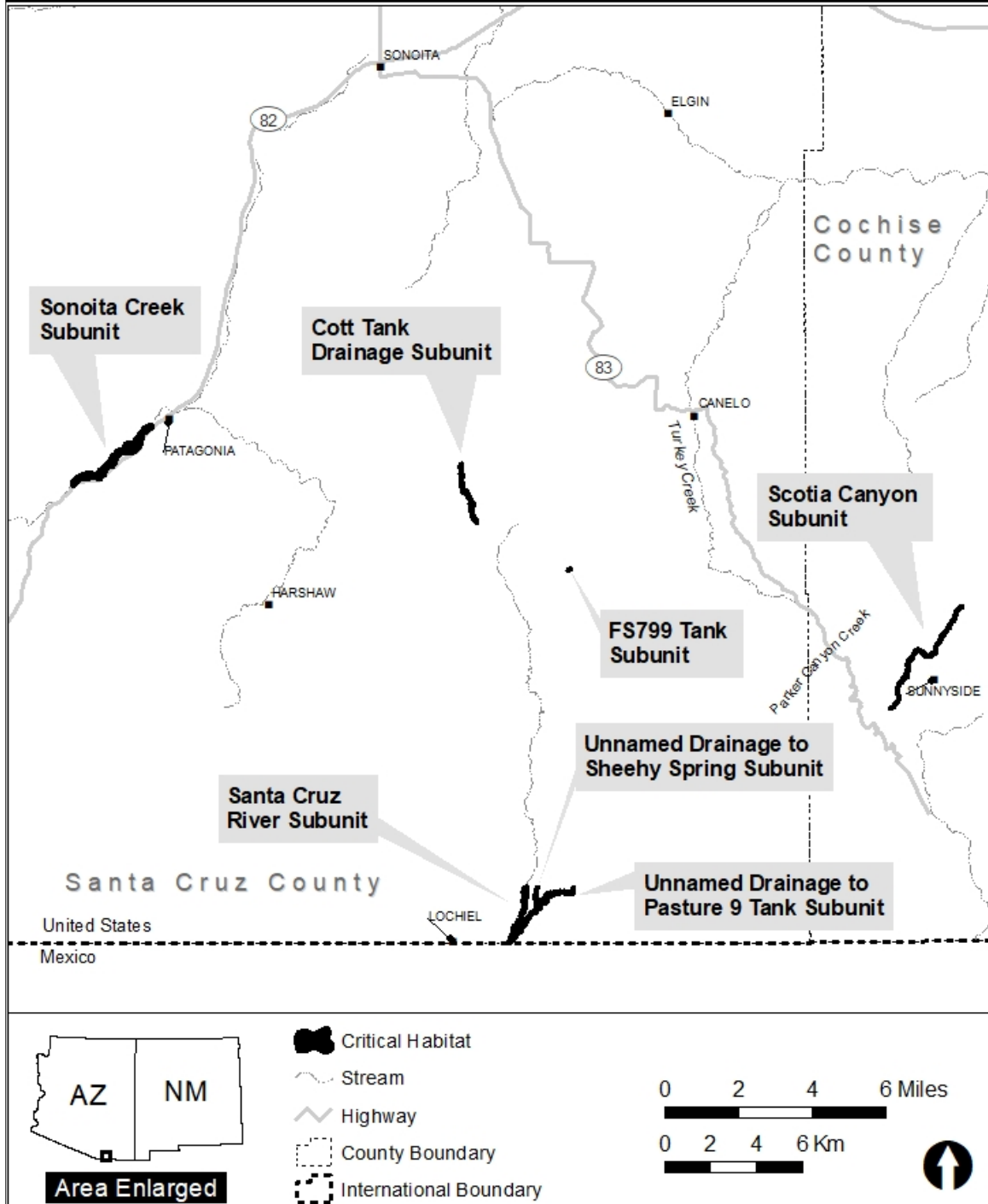


(12) Unit 7: Upper Santa Cruz River Subbasin Unit, Santa Cruz and Cochise Counties, Arizona.

(i) *General description:* Unit 7 consists of 380 ac (154 ha) in Santa Cruz and Cochise Counties, and is composed of lands in Federal (45 ac (18 ha)), State (111 ac (45 ha)), and private (224 ac (91 ha)) ownership in seven subunits near the towns of Sonoita and Patagonia.

(ii) *Map:* Map of Unit 7 follows:

Northern Mexican Gartersnake Critical Habitat Upper Santa Cruz River Subbasin Unit

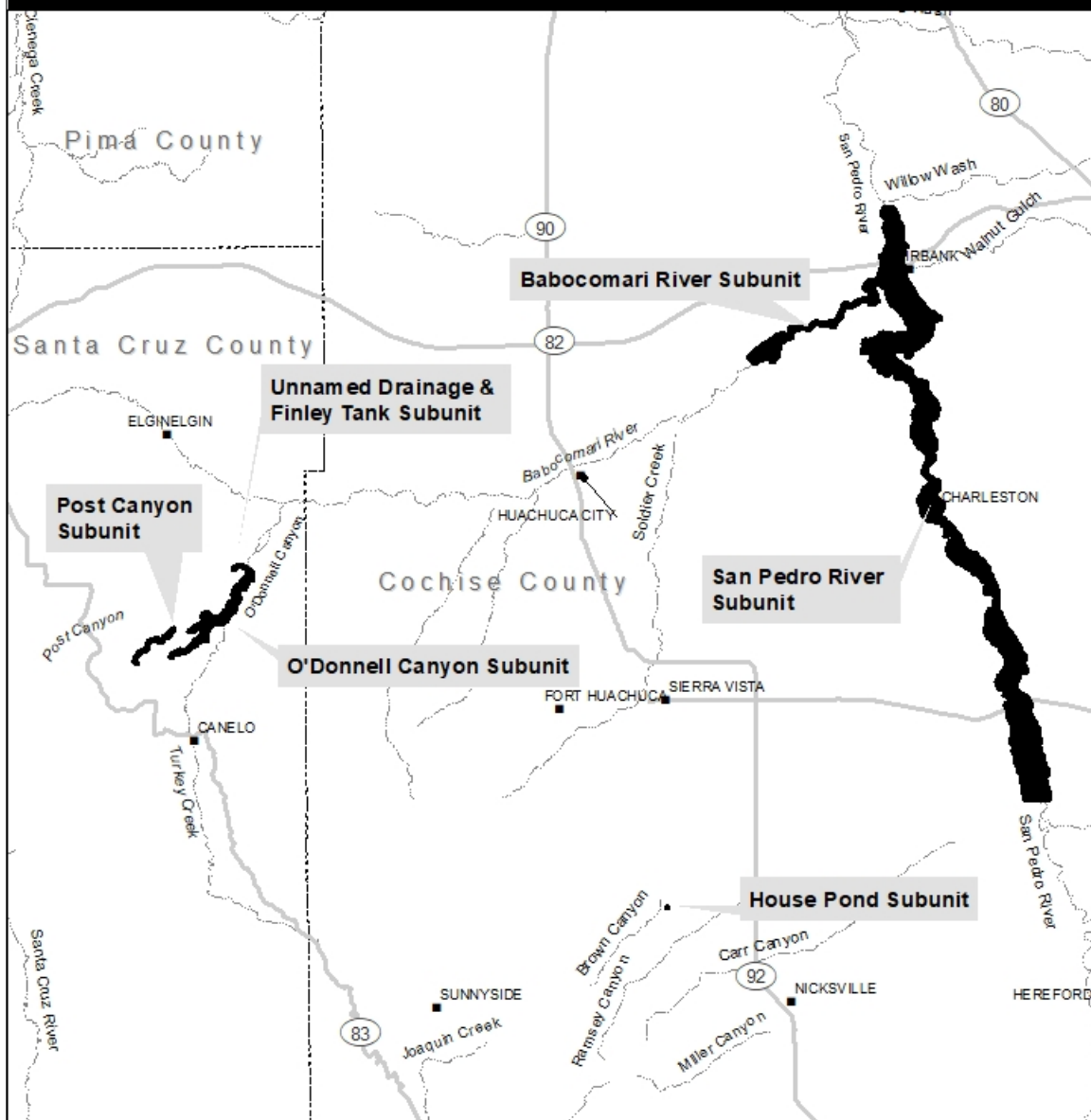


(13) Unit 8: Upper San Pedro River Subbasin Unit, Cochise and Santa Cruz Counties, Arizona.

(i) *General description:* Unit 8 consists of 5,834 ac (2,355 ha) in Cochise and Santa Cruz Counties, and is composed of lands in Federal (5,197 ac (2,103 ha)), State (8 ac (3 ha)), and private (630 ac (255 ha)) ownership in five subunits near the towns of Sierra Vista and Elgin.

(ii) *Map:* Map of Unit 8 follows:

Northern Mexican Gartersnake Critical Habitat Upper San Pedro River Subbasin Unit



Area Enlarged

- Critical Habitat
- Stream
- Highway
- County Boundary

0 2 4 6 Miles

0 2 4 6 Km



* * * * *

Martha Williams

Principal Deputy Director,

*Exercising the Delegated Authority of the Director, U.S. Fish and
Wildlife Service.*

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